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NOVEMBER 30, 1946

Editorial Contents, page 21

Railway Age

Founded in 1856

Here's a good approach in solving maintenance problems

BYERS WROUGHT IRON PIPE RAILINGS

In this railing on the approach to Hell Gate Bridge, engineers of the New York, New Haven and Hartford Railroad have combined three important design features.

By using pipe, they provided adequate safety with minimum encroachment on the walk-way area. By using wrought iron, they guarded against premature reduction of strength and section by corrosion, and eliminated any necessity for frequent painting as a protective measure.

The dollar value of all these advantages has been demonstrated many times over. Often the use of pipe railings has permitted a substantial reduction in the overall width of the bridge, without affecting traffic capacity. The durability of wrought iron has helped to maintain bridge safety during recent years when labor and materials for repairs were difficult to obtain. And the neglect of periodical maintenance that the same conditions frequently caused has not caused excessive structural damage.

Where attractiveness is a primary requirement, Byers Wrought Iron can make a big contribution also. There is growing agitation for designs that will permit a view of the countryside, instead of a panorama of blank masonry wall. Wrought iron structural shapes can be combined into extremely pleasing forms, that meet every appearance standard. At the same time, the durability of wrought iron and its non-dependence on periodical maintenance help to increase safety and decrease cost. These desirable qualities come from the unique structure and composition of wrought iron. Tiny fibers of silicate slag, threaded through the high-purity iron body, halt and diffuse corrosive attack, and anchor the protective scale.

You will find several interesting bridge railing designs blueprinted and described in our bulletin, "Wrought Iron in Bridge Construction." Ask for a copy.

A. M. Byers Co., Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Atlanta, Chicago, St. Louis, Houston, Seattle, San Francisco.

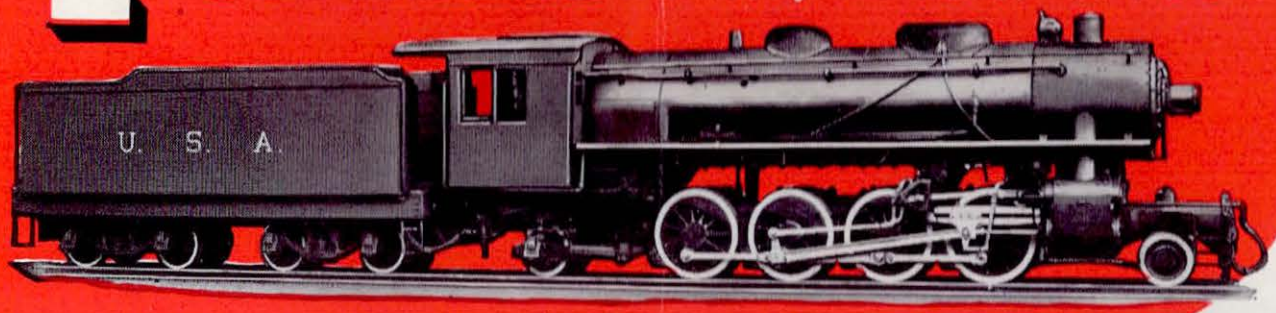
BYERS

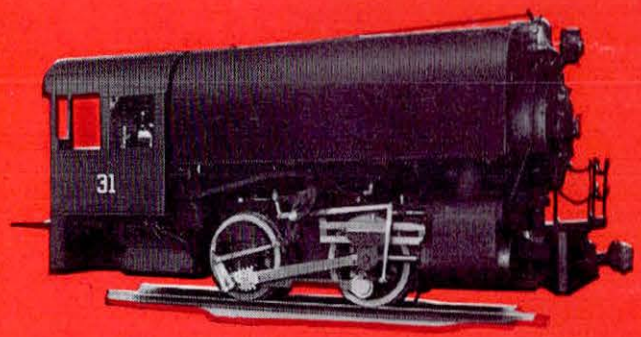
GENUINE WROUGHT IRON
TUBULAR AND HOT ROLLED PRODUCTS

ELECTRIC FURNACE ALLOY STEELS · OPEN HEARTH ALLOY STEELS
CARBON STEEL TUBULAR PRODUCTS

CORROSION COSTS YOU MORE THAN WROUGHT IRON

PORTER Steam Locomotives

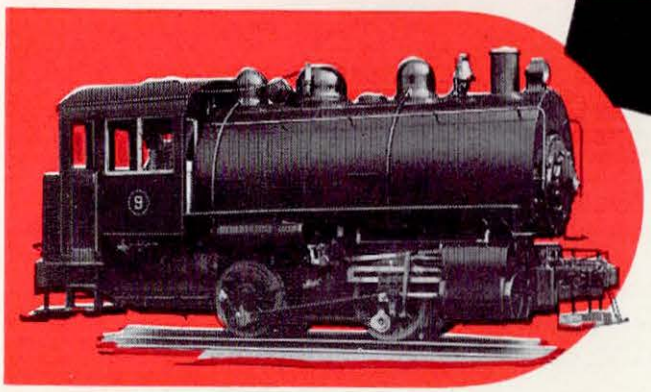




Lower Operating Costs

Less Maintenance

Greater Availability



Here are some of the features that give PORTER Locomotives their EXTRA STAMINA

1. Extra-heavy frames, flame-cut from solid, heavy-section, Universal mill plate. Annealed and heat-treated after cutting.
2. Axles, crank pins, guides, rods, and other strain-bearing parts solid-forged from best quality open hearth steel.
3. Extra large bearing surfaces on all moving parts.
4. Accurate machining of all wearing and fitted surfaces.
5. Case-hardened pins and bushings at all vital parts.

PORTER "Better Built" Equipment
Established 1866

LOCOMOTIVE DIVISION:
Diesel, Diesel-Electric, Steam and Fireless Steam Locomotives

FORT PITT SPRING DIVISION:
Coil and Elliptic Springs for Locomotives, Freight and Passenger Cars.

PROCESS EQUIPMENT DIVISION:
Complete Line of Chemical, Food, and Petroleum Refinery Equipment.

QUIMBY PUMP DIVISION:
Screw, Rotex, and Centrifugal Pumps.

HINDERLITER TOOL DIVISION:
Oil Well Drilling Equipment.

H. K. PORTER COMPANY, Inc.

PITTSBURGH, PA. • BLAIRSVILLE, PA.

NEWARK, N.J. • NEW BRUNSWICK, N.J. • MT. VERNON, ILL.

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Ads of Interest to RRs

How You Can Get More Freight Cars

With today's railroad freight car shortage continuing, it is imperative that we all again review our use of cars and determine what we can do to speed up the movement of freight.

Doing everything they can, American railroads have been unable to meet the demands. Actually, average miles traveled per car per day dropped from 51 in the second quarter of 1945 to 38.6 in the same quarter of 1946.

The railroads are making a serious effort to speed up switching and hauling time. We, the shippers and receivers, can also help by speeding up loading and unloading of cars . . . reduce waiting time at our sidings. If your plant is operating on a five day week, why not do your freight car loading and unloading on a six day basis and release those cars one day early.

If the average time of handling a car can be reduced a single day, the additional freight that can be hauled will be the equivalent of 100,000 extra railroad freight cars. You can also make your freight cars do *more* if you will ship *full carload* instead of *partial car loads.*

For example, in accordance with the Office of Defense Transportation's request we have succeeded in increasing the load in each car by 20% with a consequent 20% reduction in car requirements. As a supplier to the railroads and car building industry, we are furnishing our share of steel for new car construction, though we realize full well that it is not enough.

American manufacturers proved conclusively during the war that we can work in close cooperation. Today, we face another critical period when this same cooperation is needed. Let's all work with the railroads to keep cars moving; reap the benefits of extra shipping space, and speed up our national economy.

INLAND STEEL CO.

38 South Dearborn Street, Chicago 3, Illinois. Sales Offices: Detroit, Indianapolis, Kansas City, Milwaukee, New York, St. Louis, St. Paul

PRINCIPAL PRODUCTS: BARS • STRUCTURALS • PLATES • SHEETS • STRIP • RAILS
FLOOR PLATE • PILING • REINFORCING BARS • TIN PLATE • TRACK ACCESSORIES

Inland Continues Campaign To Keep Cars Moving

Shown here, is the latest appeal by Inland Steel to all of industry for a concentrated program to make better use of railroad freight cars. These messages urge industry to cut down waiting, speed up loading and unloading time in addition to handling of cars on a six instead of five day basis.

For over forty years we have been a supplier to the railroads and car builders and are furnishing our share of steel to assist in relieving the present car shortage, but we realize full well that this is not enough.

We believe close cooperation between industry and railroads can greatly improve the situation and shall continue to urge shippers and receivers alike to use their cars more efficiently and free them more promptly.

INLAND STEEL CO.

38 South Dearborn Street, Chicago 3, Illinois. Sales Offices: Detroit, Indianapolis, Kansas City, Milwaukee, New York, St. Louis, St. Paul

PRINCIPAL PRODUCTS: BARS • STRUCTURALS • PLATES • SHEETS • STRIP • TIN PLATE
FLOOR PLATE • PILING • REINFORCING BARS • RAILS • TRACK ACCESSORIES

The American

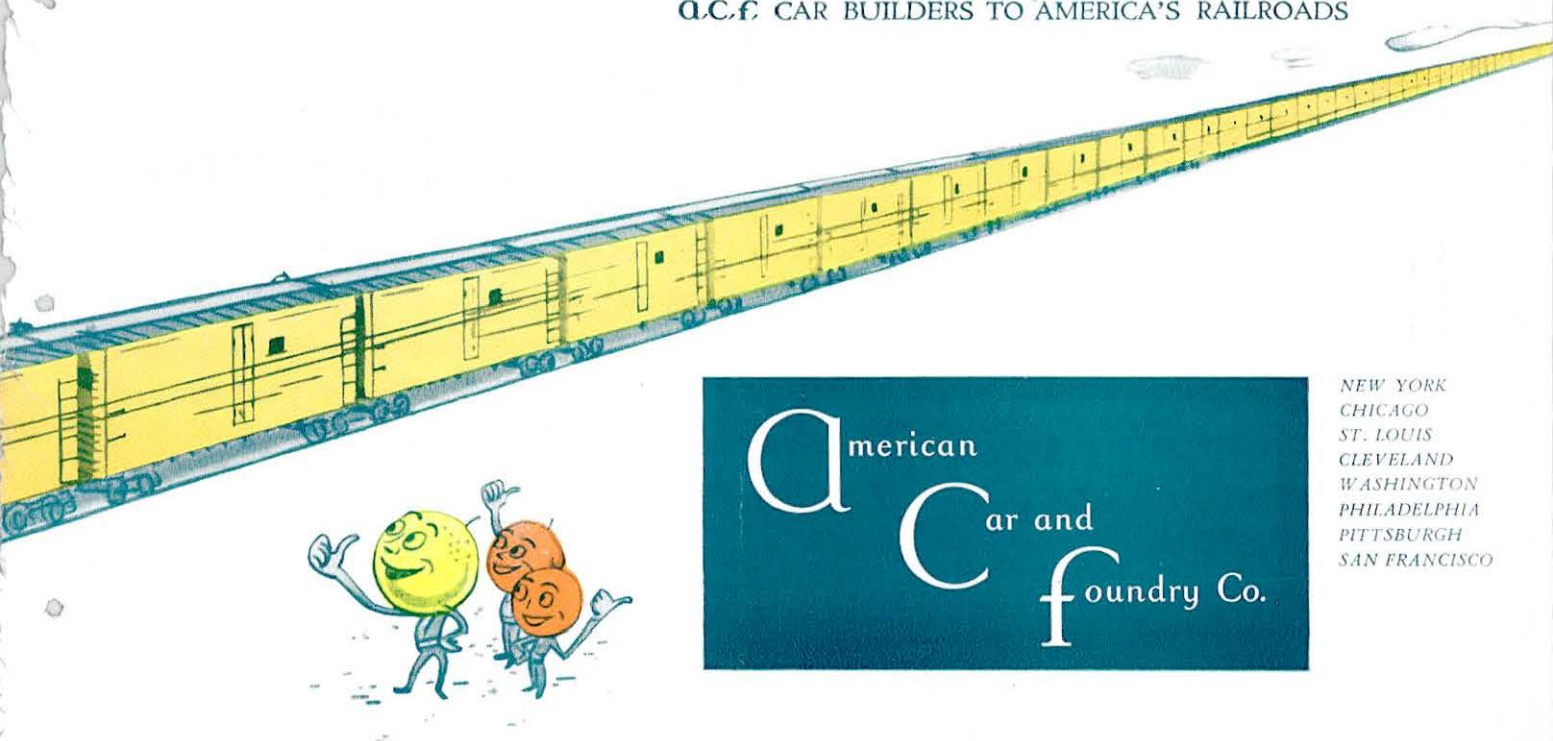
Railroads take Vitamins, too...

14 MILLION TONS OF 'EM EACH YEAR!

For the Health of America . . . 600 thousand car loads of vitamin-bearing oranges and grapefruit roll over the tracks of our nation's railroads yearly. Thanks to the railroads' "refrigerator express", fruit arrives in cities throughout the country in all its natural freshness and flavor.

Today's modern refrigerator car must have the built-in ability to withstand high speed operations. For many years ACF has been making material contributions to the present efficiency of refrigerator cars. In the future, as in the past, ACF will always provide the finest railroad car equipment.

ACF CAR BUILDERS TO AMERICA'S RAILROADS



American Car and Foundry Co.

NEW YORK
CHICAGO
ST. LOUIS
CLEVELAND
WASHINGTON
PHILADELPHIA
PITTSBURGH
SAN FRANCISCO

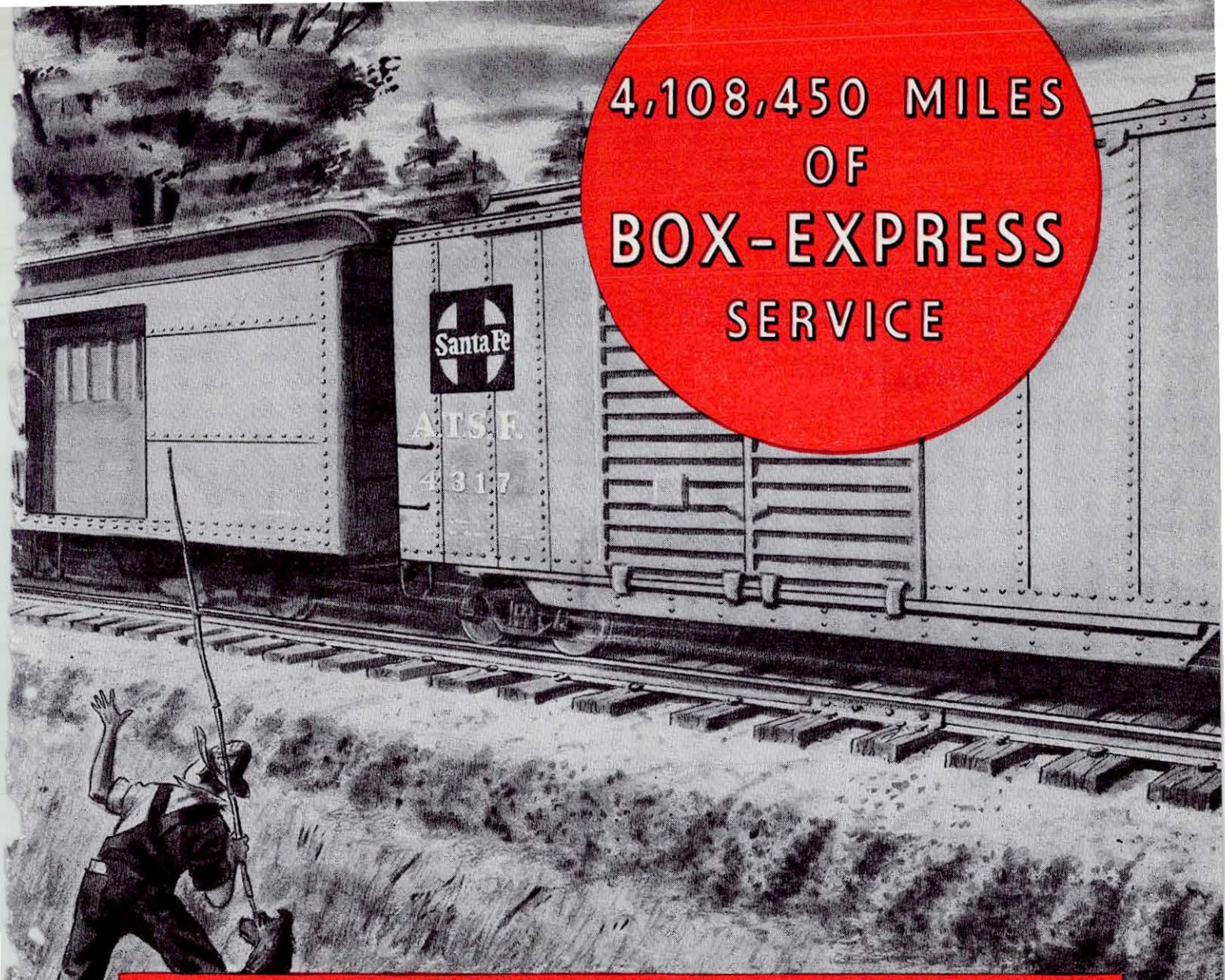
WHY BARCO STEAM HEAT CONNECTIONS ARE POPULAR WITH LEADING ROADS

- *50% fewer gaskets, springs and wearing parts to maintain.*
- *Hardened alloy steel forged metal wearing parts, including threaded end at point of greatest strain.*
- *Connection needs no dismantling when applied or removed from end valve.*
- *Many main parts of all connections are interchangeable, thus reducing funds tied up in protection stock.*
- *Longest wearing gaskets reduce intervals between replacements.*
- *Same gaskets are used in all types, on both 2" and 2½" sizes. Minimum weight and bulk in all connections.*

Barco steam heat connections for passenger cars and rear of tender are noted for their extreme simplicity, small number of wearing parts. They provide freedom from leakage, keep maintenance costs at the minimum. These connections will not fail or blow out, even under the most severe conditions. Write for details.

BARCO Manufacturing Company, NOT INC.

1800 Winnemac Ave., Chicago 40, Ill. • In Canada: The Holden Co., Ltd., Montreal, Canada



4,108,450 MILES OF BOX-EXPRESS SERVICE

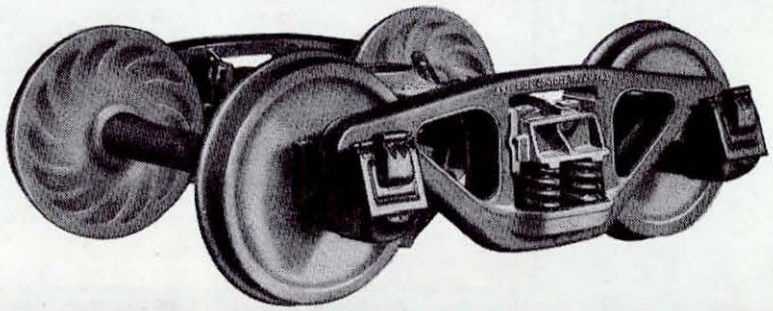
● Fifty Santa Fe box-express cars equipped with *smooth-riding* Ride-Control Trucks have traveled over 4,000,000 miles. Maximum car mileage, as of July 1, 1946, was 159,205. It's more now.

Nearly 6500 car sets of these easy-riding trucks are on order, or rolling, under Santa Fe box cars, refrigerators, covered hoppers, and caboose cars. Santa Fe has re-ordered Ride-Control Trucks *thirteen* times since 1943.

On all types of freight cars —at all loads; all speeds—the Ride-Control ride is a *soft, smooth ride* for 64 railroads and private car owners. More Ride-Control Trucks have been bought in the past *seven months* than during all the 30 months preceding. This fact speaks for itself.

A-S-F *Ride-Control* TRUCK

NO SPRING PLATES • NO SPRING PLANKS
LONG SPRING TRAVEL • CONSTANT FRICTION CONTROL



AMERICAN STEEL FOUNDRIES

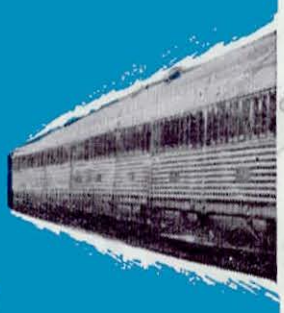
MINT-MARK OF ○ FINE CAST STEEL

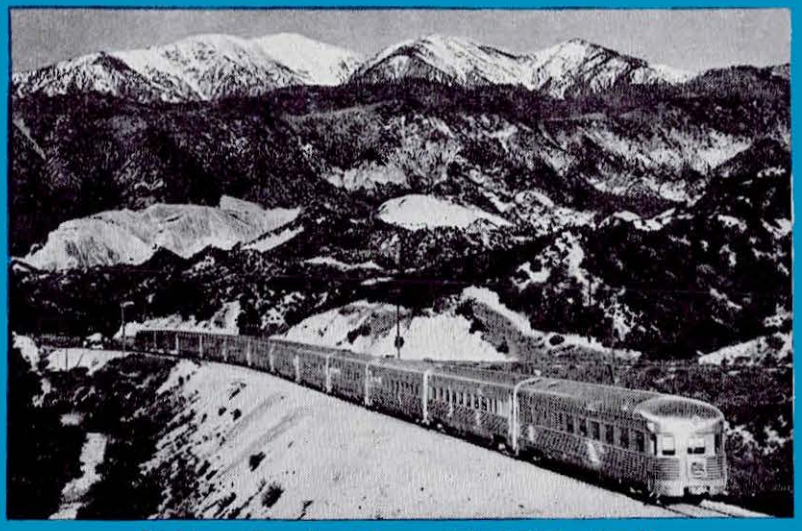
FOR THEIR FAMED

The Seaboard Railway's "Silver Meteor"

In attaining a high degree of comfort for passengers, Budd designers and the engineers of the railroads worked with United States Rubber Company engineers. Car bodies were insulated from the trucks by means of engineered rubber installed at every point where the transmission of vibration could be intercepted. Such cushioning resulted in reducing the transmission of noise caused by the many rolling and moving parts, the humming of generators. People who ride on these modern trains know how well these engineered rubber parts do their work.

There is hardly a phase of transportation and industry in which engineered rubber does not play an increasingly important part. United States Rubber Company engineers are continually extending the scope of their aid to designers and engineers of all kinds.

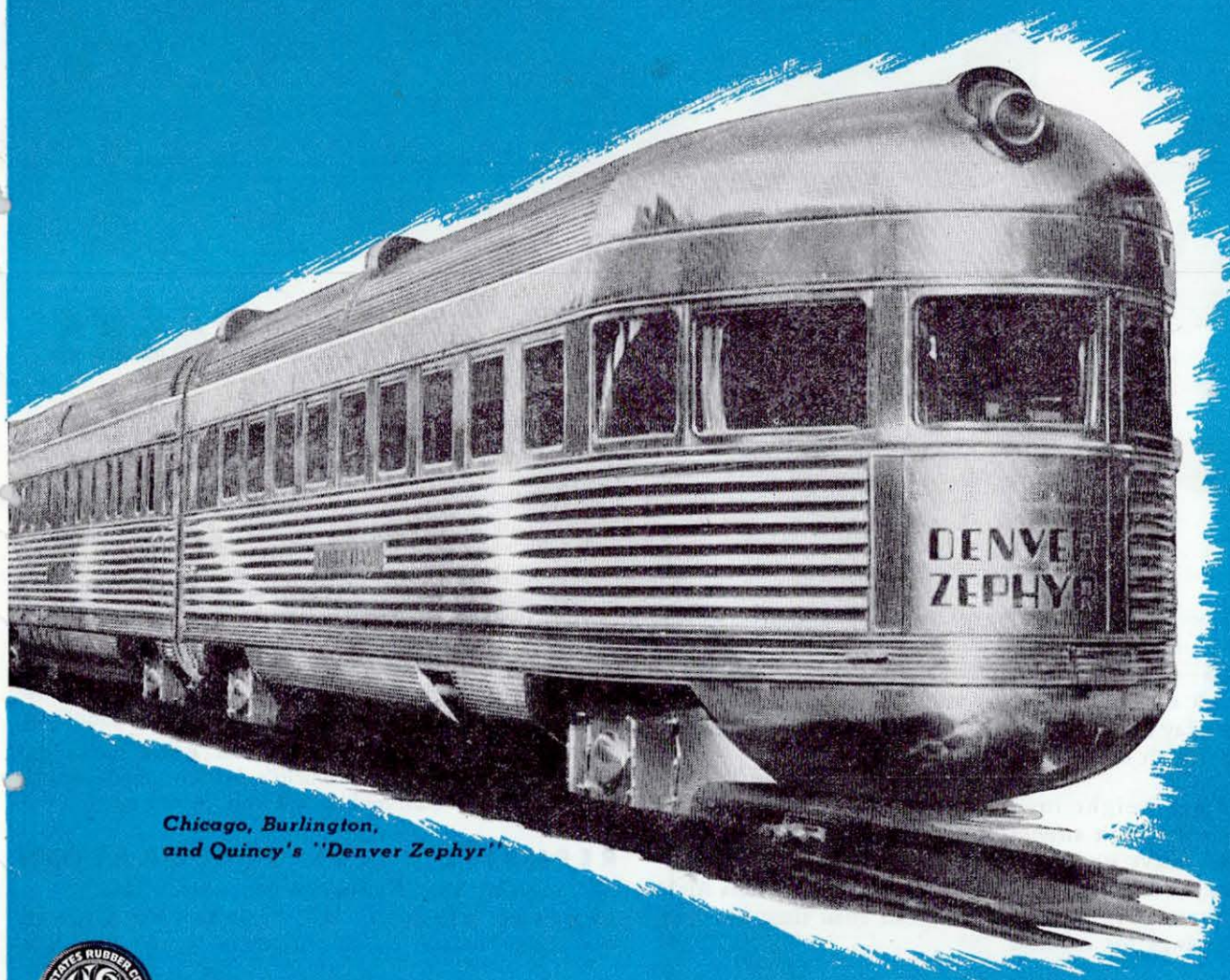




Atchison, Topeka & Santa Fe's "El Capitan"

SMOOTHNESS

BUDD STAINLESS STEEL TRAINS
USE *ENGINEERED RUBBER*

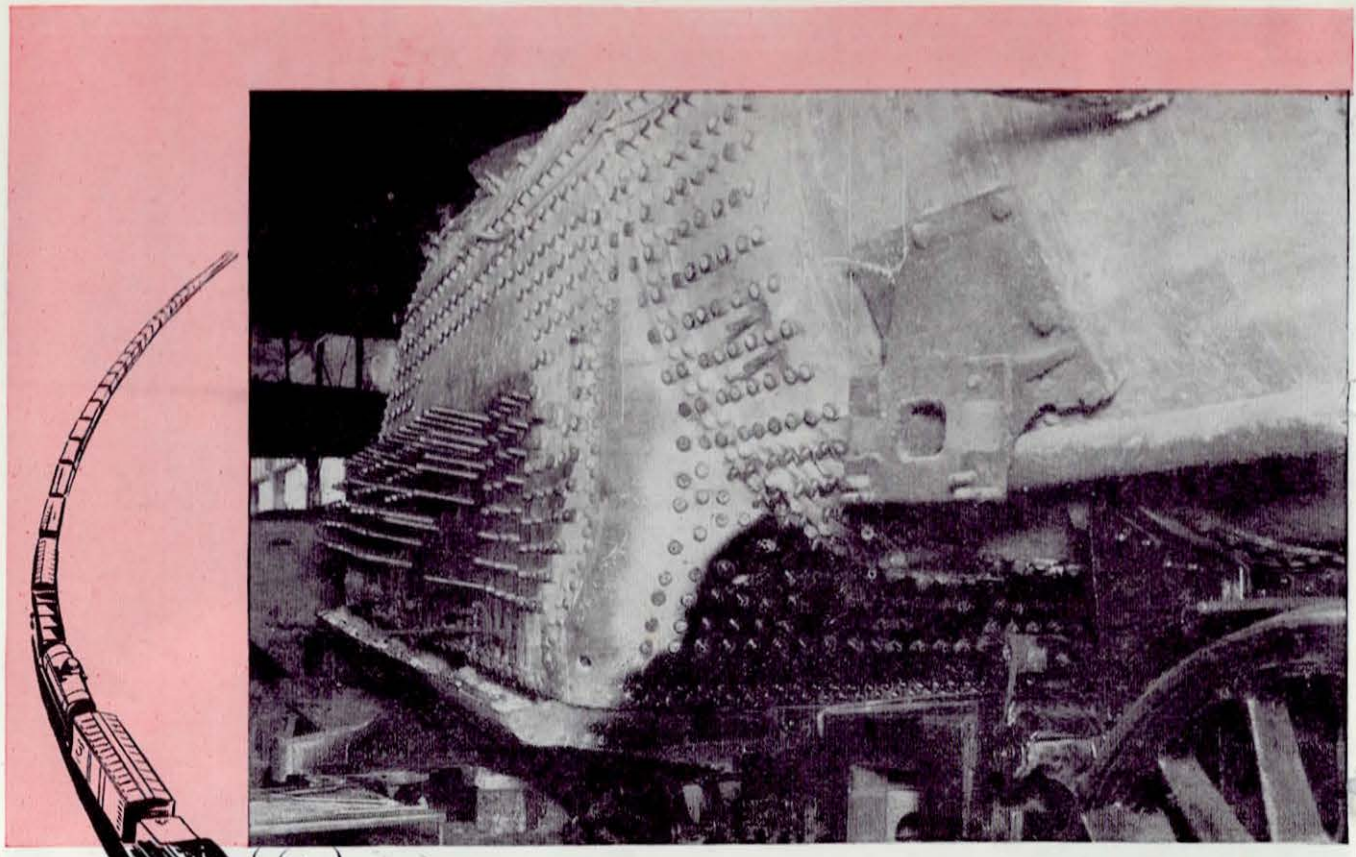


Chicago, Burlington, and Quincy's "Denver Zephyr"

SERVING THROUGH SCIENCE

UNITED STATES RUBBER COMPANY

1230 Avenue of the Americas • Rockefeller Center • New York 20, N. Y.



FOR THE STRENUOUS TASKS

—no other material can equal

ALLOY STEELS

It's not only the moving parts of a locomotive which have important work to do. There are many stationary parts—engine bolts and staybolts, as shown above—which must perform strenuous tasks faithfully day after day of service. And for such parts there's no material which does the job quite as well as Alloy Steels.

For the weight involved, you can't beat these fine steels for high strength and toughness. They withstand heavy strain, and resist shock and impact better than other materials. They resist corrosion—also high temperatures. Thus, they extend road time between shoppings for repairs.

Alloy Steels long have proved their economy and efficiency in staybolts and engine bolts, as well as in side rods, crank pins and other steam locomotive applications. Now, they're demonstrating the same qualities in vital operating parts of Diesel locomotives.

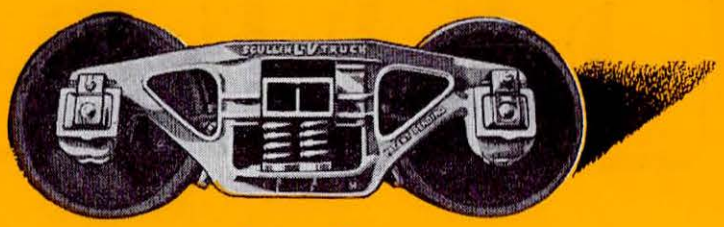
Would you like to know just what Alloy Steels can do for you? Republic—world's largest producer—is ready and well qualified to tell you. Write us.

REPUBLIC STEEL CORPORATION
Alloy Steel Division • Massillon, Ohio
GENERAL OFFICES • CLEVELAND 1, OHIO
Export Department: Chrysler Building, New York 17, N. Y.

Republic
ALLOY STEELS

Other Republic Products include Stainless, High Strength and Carbon Steels—Sheets—Plates—Pipe—Bolts, Nuts and Rivets—Boiler Tubes

SCULLIN STEEL CASTINGS FOR "ON TIME" PERFORMANCE



Scullin Cushioned LATERAL-VERTICAL Motion Truck

Scullin A. A. R. Striker with integral front draft lugs

Scullin A. A. R. Bolster Center Filler with integral rear draft lugs

Scullin Side Frame

Scullin Bolster

STEEL CASTING MANUFACTURERS SINCE 1899

SCULLIN STEEL CO

SAINT LOUIS 10, MISSOURI

NEW YORK • CHICAGO • PHILADELPHIA • CLEVELAND • ST. PAUL • BALTIMORE • RICHMOND, VA. • MEXICO CITY, D. F.

FORGED

A Working Team to a RIPE OLD AGE

Schaefer wear plates and loop hangers are forged from quality carbon steel, heat treated and quenched at the correct temperature to produce equal hardness of all wearing surfaces. Balanced wear—longer life—lower cost per year of service. Specify Schaefer. Write for Catalog 445.

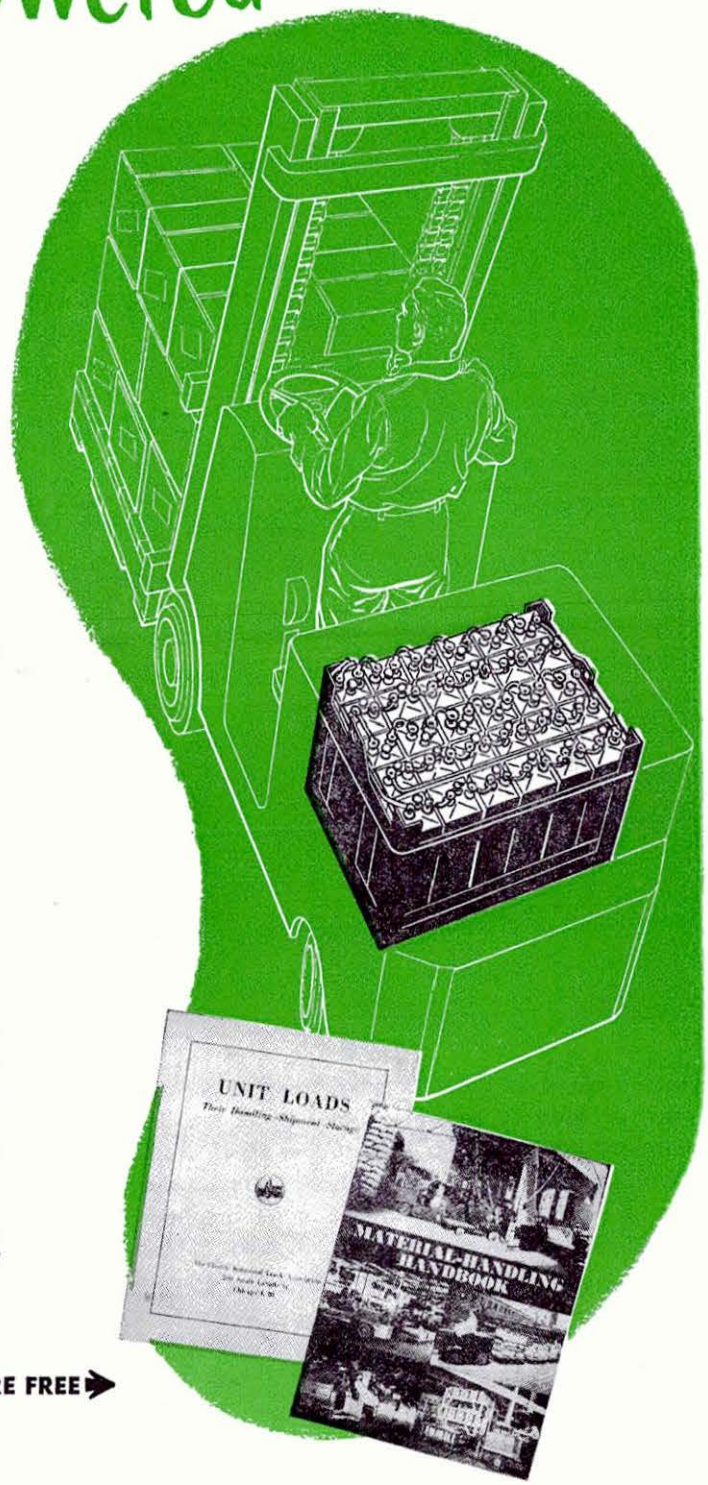
Schaefer

SCHAEFER EQUIPMENT COMPANY • • • KOPPERS BLDG. PITTSBURGH, PA.

When there's work to be done—efficiently . . . look to

Battery Powered

Industrial Trucks



Serving more than 300 fields of industry and distribution, electric industrial trucks perform material-handling tasks with a versatility and efficiency beyond those of any other system. You'll find the prime reason for this record in the following exclusive advantages of battery power—

PLANNED POWER RESERVE—with properly applied high-capacity batteries, you can have all the power you want, whenever you want it. Huge overload capacity, many times the normal output, delivers smooth surges of *extra* power for fast acceleration, for climbing ramps or handling the heaviest loads quickly and continually.

LOWEST COST ENERGY—Electric power—tops in reliability and economy for all industrial power requirements—excels as *mobile* power for material handling when used with efficient and trouble-free battery driven trucks.

24-HOUR OPERATION—month after month, year after year at *lowest* overall operating cost. On round-the-clock operations, the second and third shifts are furnished a fresh, cool ready-to-use power supply—no need for stand-by trucks. With shorter hours of use per day, batteries may remain in the trucks while charging.

BEST AND SAFEST EVERYWHERE—Battery power is quiet, clean and fume-free, eliminating product contamination. Other economy and fatigue-saving advantages include fingertip control, smooth effortless starting, safe tamper-proof speed, precise control when spotting loads, no idling cost in fuel or wear when not working.

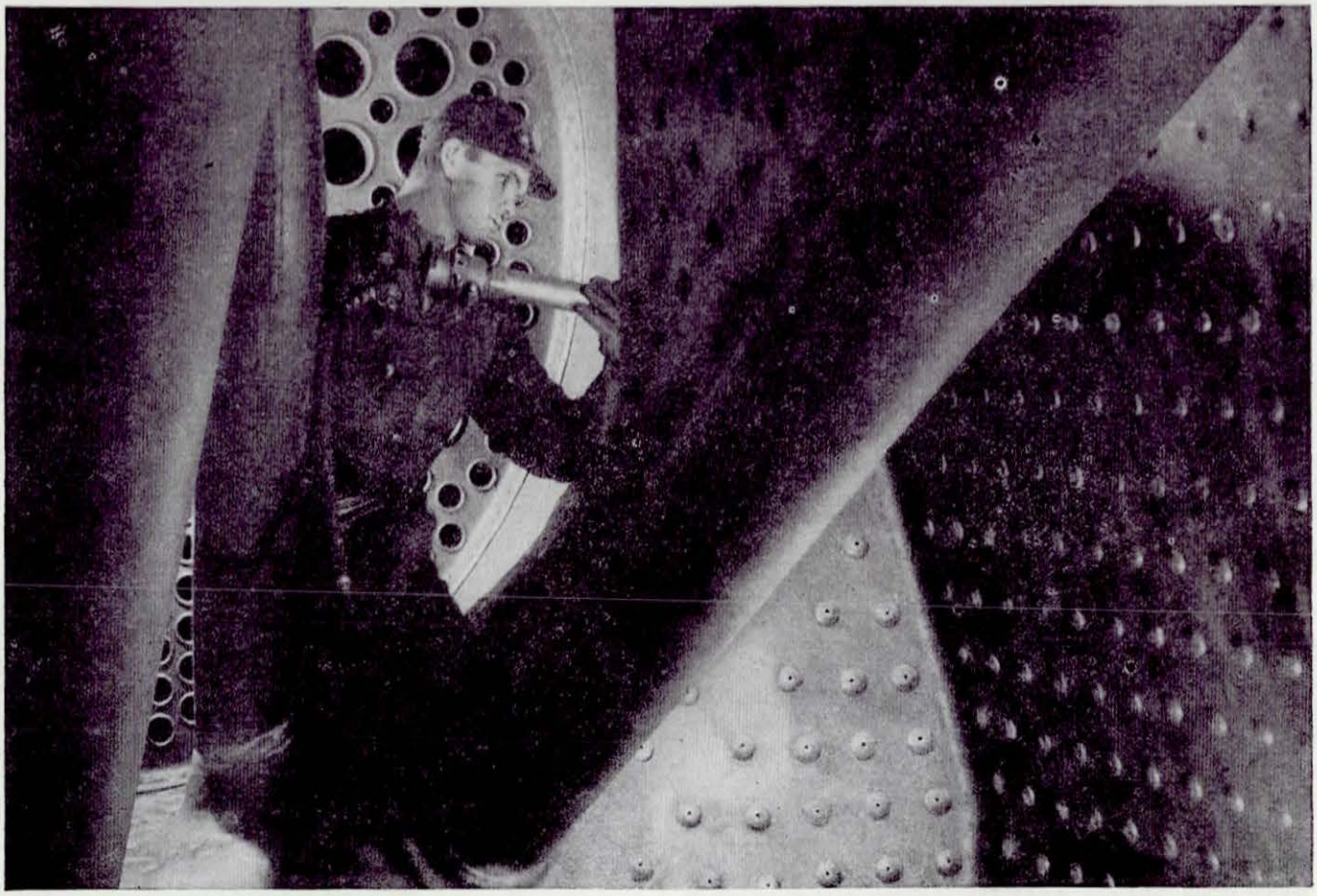
These exclusive advantages are proved by the fact that *more than 90 per cent of the electric industrial trucks sold in the past twenty years are still in service.*

Ideas for immediate savings in the MATERIAL-HANDLING HANDBOOK and UNIT LOADS. **THEY'RE FREE** ➡

THE ELECTRIC INDUSTRIAL TRUCK ASSOCIATION

208A South La Salle Street, Chicago 4, Illinois

Your dividers will show **Mayari Staybolt Steel's** *high yield point*



Set a pair of dividers to two gage-marks on a specimen of Mayari Staybolt Steel in a tensile-testing machine and apply a load to the steel. Notice how much load is required to move one of the gage-marks—how many pounds can be applied before the yield point is reached.

Yield point and tensile strength are both high in this modern alloy staybolt steel. With 50,000 psi minimum tensile strength Mayari has a minimum yield point of 33,000 psi; with 55,000 psi tensile strength, the yield point is 35,000 psi. Yet with these higher properties Mayari staybolts can be readily headed.

Ductility and fatigue-resistance are demanded for ready installation and long life under constantly-varying stresses. Tests show Mayari staybolt steel has minimum elongation of 32 per cent in 2 inches and minimum reduction of area of 62 per cent.

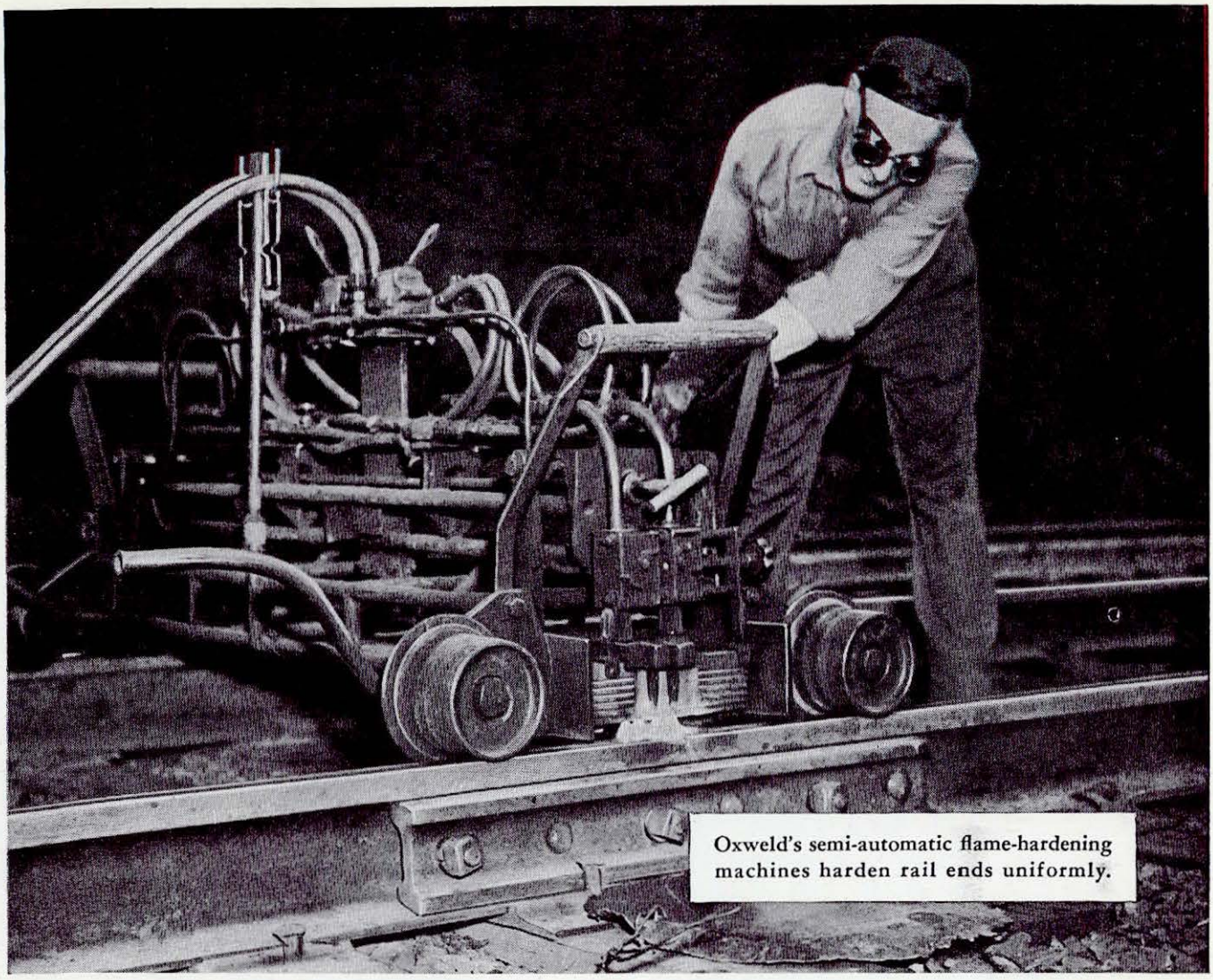
In addition to these superior mechanical properties, Mayari is priced considerably lower than many other staybolt materials heretofore in general use.

Leading railroads are specifying this steel for both flexible and regular staybolts. If you are not using Mayari, it will pay you to test it thoroughly and try it out in your own motive power.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem Products are sold by Bethlehem Pacific Coast Steel Corporation

★ ★ BETHLEHEM STEEL ★ ★



Oxweld's semi-automatic flame-hardening machines harden rail ends uniformly.

LENGTHEN RAIL LIFE . . .

with Oxy-Acetylene End Hardening

● Oxweld's end-hardening of new rail by means of the oxy-acetylene flame greatly prolongs rail life because it imparts a uniformly hard, batter-resistant surface to rail ends. A rail-end flame-hardened by Oxweld's method will wear at about the same rate as the rest of the rail, eliminating the possibility of secondary batter. Smooth rail ends cause less wear on rolling stock. Maintenance of rail ends, joint bars, and bolts is reduced.

End-hardening is done in track and may be economically performed as a part of the rail relaying operation, thus taking advantage of the unoccupied track and getting maximum productive time with a small crew.

THE OXWELD RAILROAD SERVICE COMPANY
Unit of Union Carbide and Carbon Corporation

UCC

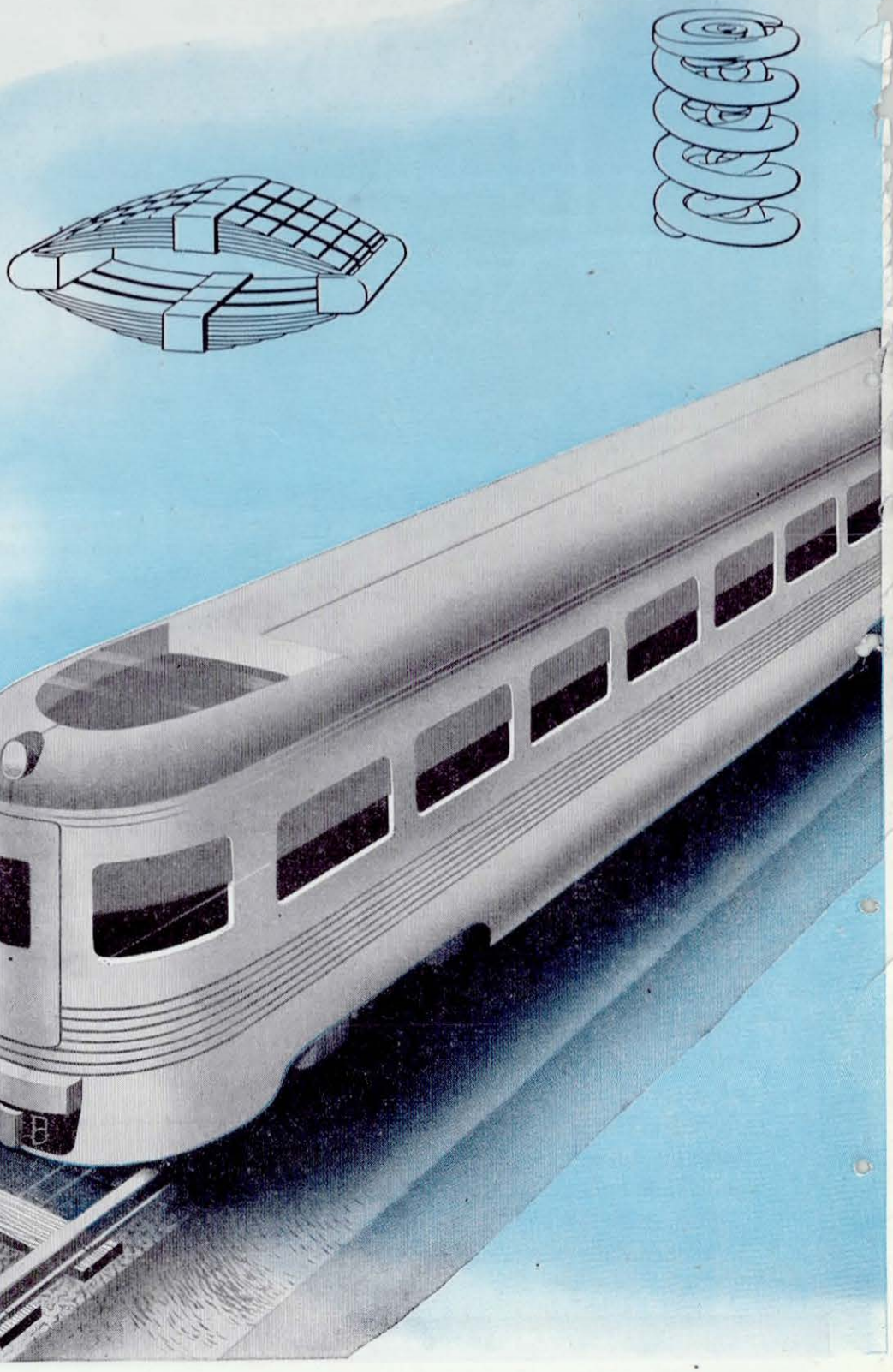
Carbide and Carbon Building Chicago and New York
In Canada:
Canadian Railroad Service Company, Limited, Toronto

OXWELD RAILROAD SERVICE

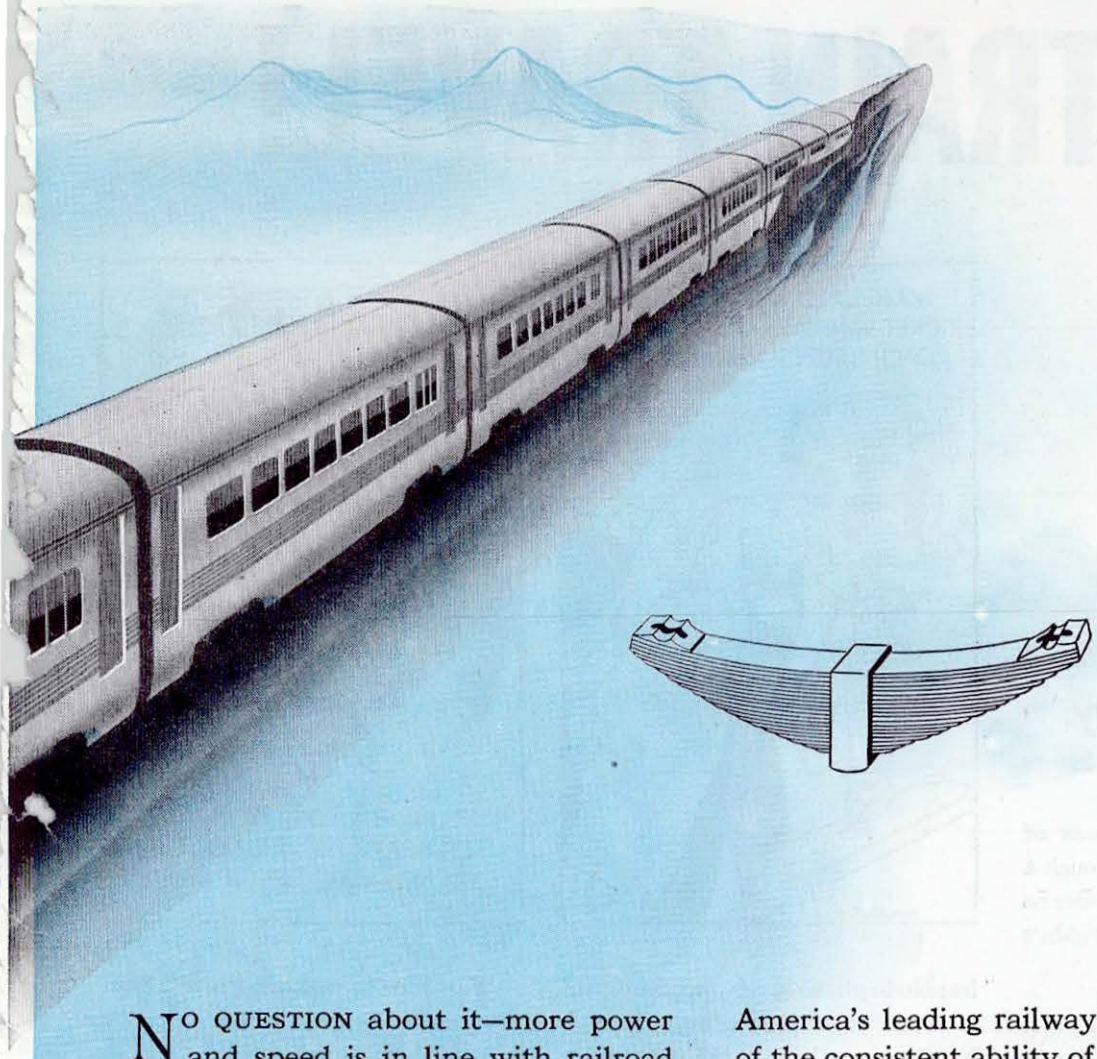
SINCE 1912—THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROADS

More power and speed will help your new equipment

build traffic, but... **Remember that-**



– Railroad Popularity Rides On Springs!



NO QUESTION about it—more power and speed is in line with railroad needs and trends. And the very fact that the new trains will be faster trains increases the responsibility and burden of SPRINGS, and of the entire spring assemblies, installed in those trains.

When you specify RAILWAY STEEL SPRINGS for such equipment you can be sure that the new problems presented will be handled adequately and smoothly.

The fact that RAILWAY STEEL SPRINGS are in service on so many of America's leading railways is evidence of the consistent ability of their designers and makers to solve practical railway spring problems to the complete satisfaction of practical railway men.

American Locomotive

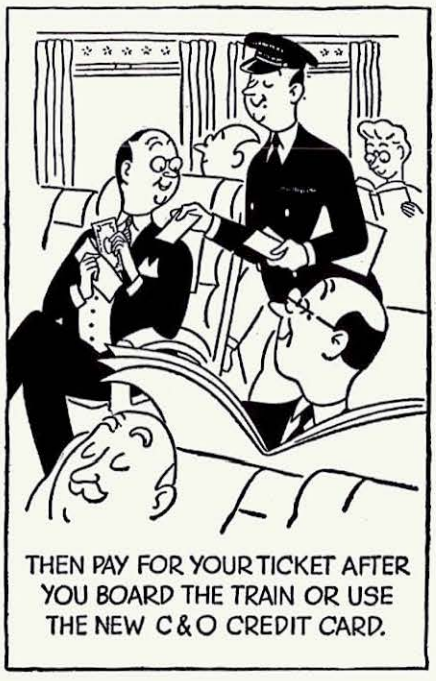
Alco

THE MARK OF MODERN LOCOMOTION

Coming Soon on the Chesapeake & Ohio

"PAY AS YOU GO" TRAIN TRAVEL!

This new optional service, now being worked out by the C & O, should be available in January.



WHY should the business of arranging a train trip be such a nuisance? Why should the traveler be put to a lot of trouble? Why shouldn't the railroad take the trouble?

Why should you have to stand in a ticket line, or send someone, often days in advance of your journey, just to get your tickets?

Why shouldn't you be able to reserve space by telephone, go right to your place on the train, then simply pay for your ticket en route?

The Chesapeake & Ohio asked itself these questions—and came up with the answer: "Pay as you go—on the C & O." Under this new plan you'll be able to phone in advance for either a coach seat or Pullman space.* You'll go straight to the train, take your reserved space, and pay for your ticket there or you can use the new C & O credit card which is now being planned.

Detailed arrangements for this new service are at present being worked out. The C & O is seeking the help of other organizations whose co-operation is needed. It is hoped and believed that you can "Pay as you go—on the C & O" in January.

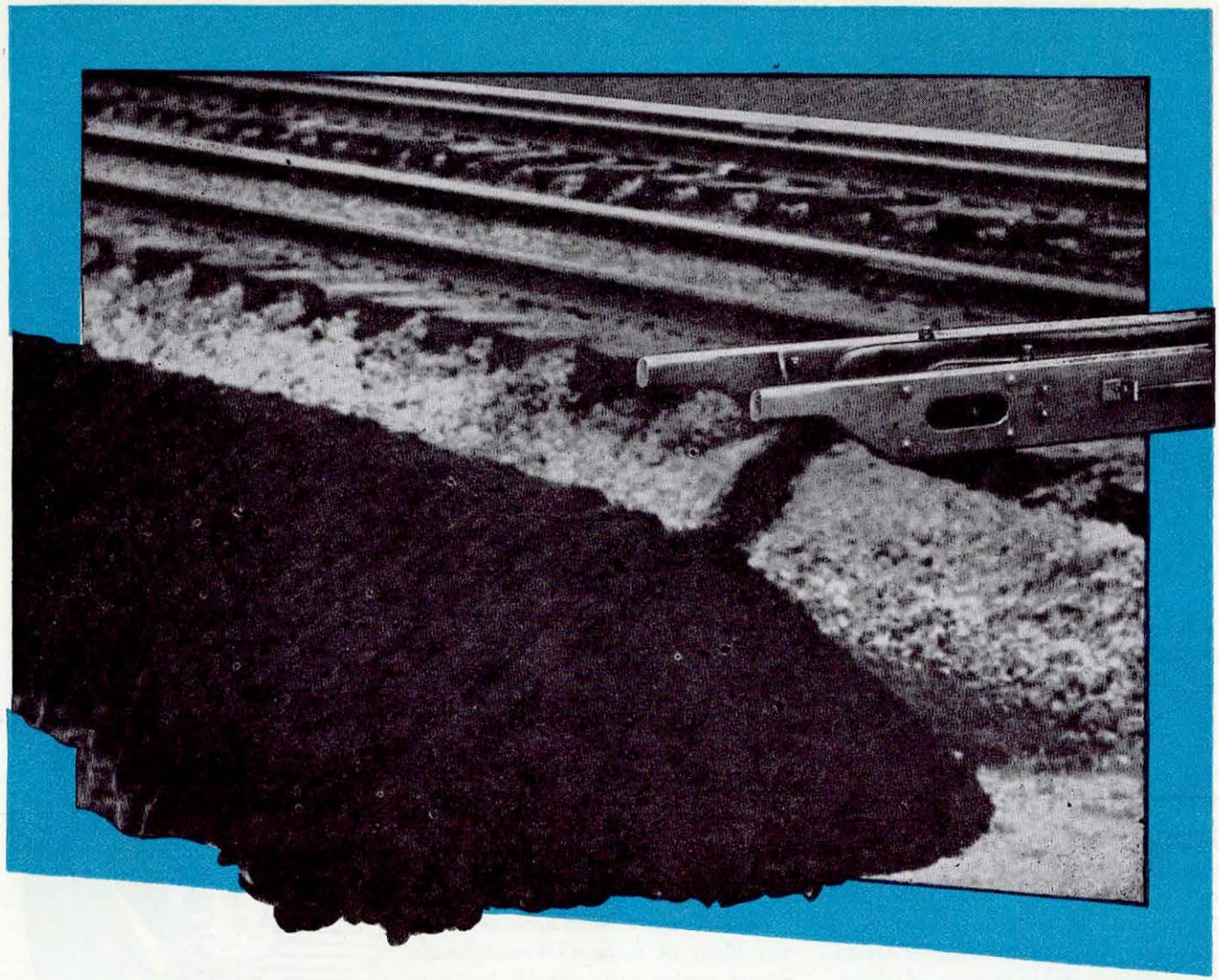
Watch for the announcement. Plan to use this service in the territory served by the Chesapeake & Ohio. It will make the planning of your trips much quicker and simpler, and cost nothing extra. It will be the latest—but not the last—of many services rendered by the Chesapeake & Ohio to make rail travel more sensible and more enjoyable.

. . .

* A credit card will be necessary to hold Pullman space reserved by phone unless, of course, you want to buy your ticket in advance, for Pullman space carries a penalty if not used or properly canceled.

PAY AS YOU GO - ON THE C&O

The Chesapeake & Ohio Railway, Terminal Tower, Cleveland 1, Ohio



MOUNTAINS (OF DIRT) FROM A "MOLE"

The mountain range above is only two feet high but it represents the peak of roadbed maintenance efficiency. Just a flick of the switch starts the new model McWilliams "Mole" Ballast Cleaner through the ballast of your road, sifting out unwanted cinders and dirt as it moves forward 3 feet per minute.

RAILWAY MAINTENANCE CORP.

PITTSBURGH 30, PENNSYLVANIA

To Direct popular attention to the remarkable achievements of American Railroads, this advertisement has been run in national media by Westinghouse Air Brake Co.

"THE GREATEST *Single Contribution* TO RAILROAD PROGRESS"

Ever stop to think of the all-important contribution that railroads make to your comfort and welfare — not just when you make a trip, but in your everyday living? Practically everything you eat and wear and use travels by rail.

During recent years the railroads annually hauled for *you* (and for every other man, woman and child in the nation) 10 tons of freight, a distance of 500 miles. This per capita tonnage included over a ton of wheat, corn, cattle and other animal and agricultural products, *plus* over five tons of coal, oil, ore and other minerals, *plus* one-half ton of lumber and forest products, *plus* about three tons of varied manufactured goods. In the same period, the passenger traffic handled was equivalent to six trips, each one a hundred miles long, for every individual in the country.

Such feats are possible only because of a continuous program of development that has made American railroads the finest transportation machine in the world. And according to one leading executive, the "greatest single contribution to railroad progress" is a small item of equipment you may have never seen . . . the air brake.

This is the hundredth anniversary of the birth of George Westinghouse, whose genius gave the air brake to this country and to the world. The organization he founded is still dedicated to the advancement of transportation and to keeping brake developments in step with railroad progress. Whatever changes tomorrow may bring, there'll be a Westinghouse Air Brake to make your journey safe. Brakes are basic to railroad progress.

Westinghouse Air Brake Co.

WILMERDING, PA.

Railway Age

With which are incorporated the Railway Review, the Railway Gazette, and the Railway Age-Gazette. Name registered in U. S. Patent Office.

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"UNION" I.T.C. assures it!

Instant voice communication between crews of head-end and helper locomotives is just one example of how "Union" I.T.C. helps bring modern trains to destinations swiftly and efficiently.

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UNION I.T.C. THE VOICE OF EXPERIENCE IN TRAIN COMMUNICATION

The Week at a Glance

LABOR'S PROGRAM: A very meaty report has come to light on the relationships between railroad labor and management, its source being a committee of brotherhood leaders headed by George Harrison, the clerks' president. The post-war objectives of the railroad unions, according to this illuminating and significant document, are these: Legal sanctions for joint action on rates; laws under which funds may be accumulated for deferred maintenance; "liberalization" of retirement and unemployment benefits; and establishment of a system of compensation related to the guaranteed annual wage plan. In its analysis of these proposals and the arguments set forth in their support, the committee evidences the conservative viewpoint expected of the railroad brotherhoods, repeatedly emphasizing the fundamental importance of cooperation and consultation between labor and management in working out their differences.

●

1946 MODEL: Faced with a relatively sudden growth in its l.c.l. business, after a long siege in the doldrums, the Katy found its main St. Louis freighthouse inadequate and inefficiently arranged for the job it had to do. It was necessary either to establish a new plant elsewhere or to make the old one over, and the latter was considered the more promising procedure. An illustrated article this week outlines the history of this facility and describes the rearrangement of its components and the operating techniques that have been developed to take advantage of its capacity and adaptability.

●

BERGE ON THE JOB: If anyone entertained any delusions about the desire of the anti-trust lawyers on the government payroll to shape to their chosen pattern the litigation that is holding up the final disposition of the Pullman Company, those lawyers' recent action in the I.C.C. hearing on the railroads' offer to take over that business would have been something of a shock. As our news report of the proceedings explains, Mr. Berge's zealous prosecutors have taken advantage of the commission's power of subpoena to bring into the record certain documents in which they appear to hope to find evidence of "conspiracy" they can take to court to support their argument that the railroads aren't sufficiently respectable to run sleeping cars.

●

ELECTRONICS IN SERVICE: So much is going on these days in the field of communications, even in the restricted applications of the art peculiar to railroading, that the specialists who attended the recent Detroit convention of the A. A. R. Communications section (reported in this issue) had their hands full to keep up with all that was brought out. Radio has its place in railroad communication services, it was agreed, but radio is not a cure-all for human shortcomings, and the public must not be allowed to get, or to retain, the idea (sometimes fostered by broadcasting celebrities whose technical proficiency is at least questionable) that all railroad accidents could be prevented if the railroads would only get out of their rut and use radio everywhere they could. As the section's chairman so pertinently observed, "a careful man is still the best safety device known." But for operating convenience, for faster and more flexible exchanges of information or orders in handling trains on the road and in the yard, and as an added safety precaution, modern electronic communication systems, inductive or radio, have put on a convincing show in the varied experiments the railroads have subjected them to, and the list of installations is growing.

●

SIMPLE SOLUTION: If the latest coal mine strike proves anything, it proves that there is something utterly wrong with legislation that pretends to control labor unions while permitting them to enjoy and capitalize on monopolistic privileges peculiar to them among all the elements of the economic system. It is understandable that the disapproval of John L. Lewis' current performance is well nigh unanimous—shared by union members and capitalists and ordinary citizens alike—but the primary responsibility for this latest exhibition of ruthless and unpatriotic behavior by a union boss rests on those who have made his defiance of the orderly processes of negotiation and of law possible and relatively safe for himself. A political policy of appeasement through legislation has brought on this situation—and more law is not the cure for it. As the leading editorial this week emphasizes, what is needed is less law providing immunity for union dictators from the operation of punitive statutes that apply to everyone else. What is needed is repeal of the legislation under which the unions' monopolistic powers have developed. What is needed is subjection of the labor unions to the restraints against monopolistic excesses that already are effective as to all other elements of society.

●

KENDALL'S COMPLIMENTS: By really putting their hearts into the job, says Chairman Kendall of the Car Service Division, the country's shippers and railroads have gotten more transportation out of the available supply of freight cars than ever before. The latest comment on the car supply, and on transportation conditions generally, is reviewed this week in the news pages. In the efficient use of box cars particularly all parties did the "impossible," according to this authority, a record that resulted from teamwork between the carriers and their customers. But he warns them that a lot more teamwork will be needed to get out of the woods.

●

2-8-2 FROM 2-8-0: Fifteen light locomotives are undergoing a major operation in the Canadian Pacific's Angus shops, during which they will acquire stokers, new boilers, trailing trucks, and larger tenders. Built prior to World War I, these modernized engines are intended for assignment to light-tonnage trains in either main line or branch services. An illustrated feature article summarizes their structural changes and revised specifications.

FOR FASTER I.C.C.: In making their reply to the "questionnaire" sent out last year by the House interstate commerce committee, the Interstate Commerce Commission practitioners may have sidestepped some of the controversial issues raised by Chairman Lea's inquiry, but they were specific enough in one expression—that is, that the commission's handling of cases often takes more time than is required by full compliance with the letter and spirit of the law and the principles of equity. Analysts of railroad credit and earning prospects haven't felt like disagreeing with this pronouncement as they wondered over the delayed I.C.C. action on the petition for a general freight rate increase filed last spring by the railroads.

●

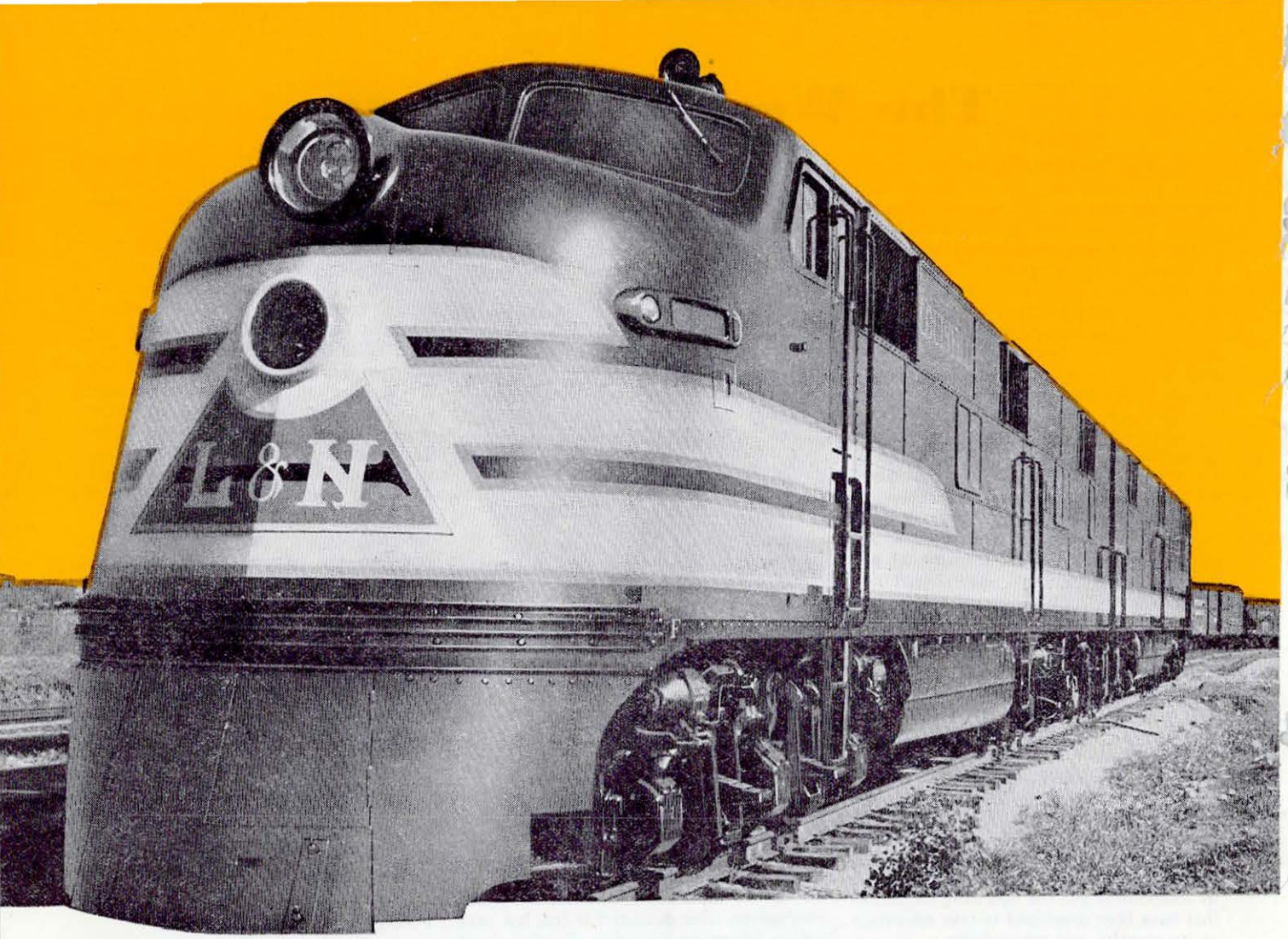
WEATHER-WISE: Speaking to the Western Railway Club, C. F. Kettering of General Motors paid his tribute to the railroads' reliability with the pertinent observation that some other forms of transportation may be faster, "if you pick the right day." Subsidy-conscious as they are, some of the aviation zealots may feel like accusing this automobile manufacturer of being subsidized by the railroads, but it is more likely that their determination to get more complete weather and instrument service from the government (at a very considerable increase in cost, not to the airlines that profit from such service, but to the general public, including the railroads) will receive a renewed stimulus from this seasonally appropriate comment.

●

EVERYBODY'S DUTY: An editorial herein comments on the cooperative efforts of the railroads and the National Safety Council to save motorists from the fatal consequences of their own folly by means of a persistent campaign to reduce grade crossing accidents. By degrees the fact is sinking in that this is not a railroad problem but a traffic problem, and that the responsibility for its handling rests on the public as well as on the carriers. But awakening public consciousness of its share in this responsibility is no reason for any let-down in the railroads' own long-sustained campaign to make their highway crossings safer for vehicular traffic (and for trains, too).

●

HOT—AND COLD: As usual, a wide variety of transportation questions of current interest felt the probe during last week's annual meeting in New York of the N. I. T. League, the subject of a report on page 925. One very positive expression of opinion was in opposition to the use of scarce materials for building freight cars for export at a time when the domestic car shortage is so critical and production of cars for American railroads is so far short of their needs. On the other hand, the league was definitely cool to the proposal that credit arrangements be made available to businesses for the purchase of railroad tickets. The suggested procedures would require so much bookkeeping, according to the committee reporting on the matter, that there would be nothing to gain by using them.



Championship Team rolls up huge scores

Among other service achievements to which the Louisville and Nashville Railroad can point in nearly a hundred years of operation, is the recent "on duty" record of a dozen General Motors Diesel passenger locomotives.

Eight of these Diesels have been in service over 4 years as of August this year—the first one went onto the rails in May 1942. The four "younger" Diesels were put into service in April 1945.

But veterans or youngsters these General Motors Diesels show remarkable similarity of high availability — hovering close to 99%. Average availability for all these Diesels is 98.6%. Average monthly mileage 16,740.

In Diesels as in other things, proved performance counts. Here it also signifies the quality and durability built into General Motors Diesels — the one and only product built by Electro-Motive in the largest and most modern plant of its kind.

PERFORMANCE RECORD OF 12 GENERAL MOTORS DIESELS

Locomotive Number	Month Delivered	Miles Operated	Miles Assigned	Per Cent Availability
450	5-42	863,006	879,299	98.2
451	5-42	877,459	886,881	98.9
452	5-42	869,068	889,481	97.7
453	6-42	844,823	858,514	98.4
454	6-42	864,377	869,809	99.4
455	7-42	808,635	829,769	97.5
456	8-42	822,150	840,447	97.8
457	9-42	792,406	799,120	99.2
458	4-45	297,850	298,152	99.9
459	4-45	297,588	300,572	99.0
460	4-45	293,992	294,220	99.9
461	4-45	286,627	287,311	99.8
	Total	7,917,981	8,033,575	98.6

GENERAL MOTORS LOCOMOTIVES

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS — LA GRANGE, ILL.

RAILWAY AGE

Destroy Labor Monopolies

It has been proved again by John L. Lewis, as it had been proved by him and other labor leaders innumerable times before, that the only way to deal with a labor monopoly is to *destroy* it.

What is a labor monopoly? It is a labor organization that has power to shut down an *entire industry*. An *entire industry* may be the only power and light company in a community, as the one in Pittsburgh, which was shut down by a long strike. Or it may be all the coal mines or railroads of the country, both of which have been shut down by strikes within the last year. Any union that can deprive all the people of the country or of any community of any needed product or service is a monopoly having power that no other person or organization can legally exercise and which no person or organization should be allowed legally to possess.

The latest strike in the coal mines has proved the most conclusively of any event that has occurred a point repeatedly emphasized by *Railway Age*—i.e., the futility of efforts to *control* labor monopolies. The Smith-Connally Act was passed expressly to prevent such strikes as the latest one in the coal mines. It empowers the federal government to seize any industry cessation of the operation of which would create a national emergency and prohibits strikes while the industry is under government operation. The government seized the coal mines last May and settled a dispute then pending by making a contract with the United Mine Workers for the duration of government operation. Because owners of the mines have refused to assume the contract made by the government, the mines are still under government control. Lewis demanded that the government negotiate with him regarding a new contract in which he hoped to get more favorable terms. On the government refusing, he notified it he had cancelled the existing contract. In accordance with Lewis' long-standing dictum, "no contract, no work," this was notice to the miners to strike, and they immediately did so.

Whether Lewis' action violated the Smith-Connally Act is a mere legal technicality. The important point is that the act's express prohibition of strikes in any industry under government operation has failed to prevent in an industry when it was under government operation one of the greatest and most dangerous strikes in the nation's history; and Lewis was able to cause the strike in spite of a law expressly prohibiting it, because the mine workers' union has a nation-wide monopoly of mine labor and Lewis holds a position of dictatorship in that monopoly.

The monopoly power possessed by the miners' union and Lewis is not unique. Hundreds of other unions in the country, including railway labor unions, have equal power of the same kind and are similarly subject to the dictatorship of their leaders. The Brotherhood of Locomotive Engineers and the Brotherhood of Railroad Trainmen, on orders from their heads, have within the last year tied up virtually all the railroads of the United States. And this in spite of the fact that the provisions of the Railway Labor Act had long previously been widely and loudly heralded as an infallible means of maintaining industrial peace.

It has long been becoming plainer, and should now be plain to even the blindest and most prejudiced, that labor monopolies have become the worst threat to the welfare of the people of the United States excepting war with which they ever were menaced.

The Sherman anti-trust act formerly prohibited all combinations or conspiracies in restraint of interstate trade or commerce. It still

prohibits such combinations or conspiracies by business. Even the railroads, which are subject to comprehensive and detailed regulation of their rates and service by the Interstate Commerce Commission, are being proceeded against in the courts for having allegedly violated the anti-trust laws by doing things of which the Commission tacitly or expressly approved.

What is needed to destroy labor monopolies is not *new* legislation, but *repeal of past legislation* that has enabled labor unions to acquire monopolies and to exercise the power of monopolies. The principal legislation having this purpose and effect are the Norris-LaGuardia Act and the National Labor Relations Act. Repeal or adequate modification of these laws would subject labor unions to the same prohibition of combinations or conspiracies in restraint of trade or commerce that applies to business. The need that this be done has become obvious and imperative.

Lightweight Freight Cars

A decrease in the lightweight of freight cars and a corresponding increase in revenue-producing capacity for many years has been an objective of freight-car designers and builders in their search for rolling stock that would improve freight-train operation. By the use of low-alloy high-strength steels or of lighter materials of equal or greater strength than mild carbon steels, and by utilizing welded construction, freight cars with the desirable characteristics of less weight and greater capacity have been designed and built in relatively limited quantities before and since the war.

The advantages and possibilities of lightweight freight cars were reviewed very concisely by R. L. Rex, railroad mechanical assistant, Air Reduction, New York, in his paper on welded freight cars presented before the railroad session of the American Welding Society at its annual meeting last week at Atlantic City, N. J. Although these advantages and possibilities have been stated before by engineers interested in the economies resulting from the elimination of dead weight, they will bear restating because of their importance to the improvement of freight-train operation. The possibilities are, as Mr. Rex said in discussing low-carbon high-strength steels and all-welded construction, obtaining either less weight at the same strength, more strength at the same weight or a compromise effect of somewhat less weight and more strength, with the emphasis thus far being in the direction of obtaining less weight at the same strength. The use of all-welded construction enters into these considerations because of the elimination of the weight of rivets and their attending lap joints and the adaptability of welding to a more simple and a correspondingly less weight-consuming design. While the possibilities of aluminum alloys and stainless steels as materials for lightweight freight cars are not overlooked, the emphasis is placed on the low-alloy high-strength steels because they have been used more extensively.

Estimating the over-all weight reduction resulting from the combined use of such steels and all-welded construction, depending upon the type of car, as ranging between five and seven tons, Mr. Rex said the weight reduction could be translated into one or more of at least three important advantages that are well known to those who have studied freight-car materials. The advantages are: (1) Greater car capacity without increasing the total load to be hauled; (2) fewer cars needed for the movement of a given amount of tonnage; or (3) less fuel expended in hauling a given train length. In any combination such advantages mean greater net operating income.

Full advantage cannot be taken of materials and fabrication methods now available without lowering the weight to a point where standard freight-car brake equipment does not meet the loaded car requirements for braking ratios. The empty-and-load brake offers one way to remove this barrier, but, partly because of its price differential and partly because of its functional limitations, it has not proved generally effective for this purpose. A brake with automatic features to provide variable-load, rather than empty-and-load, adjustments, is now under development and until it becomes available for service present braking restrictions will in most cases continue to limit weight reduction.

Crossing Safety Is Everybody's Job

The problem of controlling conflicting traffic at the intersection of a railroad and highway at grade is not unlike that at the intersection of two highways alone. One stream of traffic must be stopped to allow the other to proceed; control signals and obstruction devices must be reasonably standard and understood by all parties; and all vehicles must share to an equal extent responsibility for safe movement through the intersection.

Despite this basic similarity, the assignment of responsibility for the safe conduct of traffic through railroad-highway intersections has been far different than for that at highway crossings alone. In the former case, by tradition dating back to the horse-and-buggy days, there falls upon the railroad the entire burden of protecting the crossing. It can stop the autoist by thrusting a gate down in his path. It can swing a red lantern in his face. It can whistle at him. But it is difficult for the railroad—a private corporation—to educate the motorist, and impossible to police him. About the most the individual carrier can do is to wheedle the driver into taking care at crossings by placing "Careful Crossing Campaign" posters on station walls, where, more often than not, the motorists most needing education never focus their eyes.

The control of traffic at highway intersections is another story. All traffic operating through such intersections has an equal responsibility for safe operation. The behavior of all vehicles at the intersection is governed by legal code, binding on all. Finally, the police power of the state is invoked to insure obedience to that code.

Happily, a recent development bids fair to narrow this unfortunate gap between the treatment of railroad-

highway crossings and purely highway intersections. Late in 1945, individual railroads, either direct or through the regional presidents' organizations, made substantial initial contributions to the National Safety Council for the specific purpose of broadening that body's activities to include railroad grade crossings as a major consideration. The Safety section, Association of American Railroads, and the Steam Railroad section of the Council have a joint program of action well under way, as has already been pointed out editorially in the *Railway Age* of July 27.

The advantages of such a pooling of efforts are manifold. From now on, grade crossings will be considered very much in the light of other types of intersections—as a *traffic,* not a *railroad,* problem. The motorist, for example, has already received a pamphlet from the Council in which he is advised how to behave at a railroad crossing on the same page as he is "briefed" on passing another car on a two-lane highway. Thus, his crossing of railroad tracks is made—not a separate activity—but an integral phase of the whole problem of getting his car about safely.

Since the National Safety Council is in close touch with all elements of the public, the joint partnership will be better able to publicize the grade crossing aspect of traffic safety among the driving public than would the railroads alone. It remains for the railroads to make the most of the partnership; to supply the joint campaign with facts and ideas; and to support the joint publicity program. And, of course, there should be no let-down in the vigorous and long-standing campaign waged by the railroads themselves, individually and through the A. A. R.

Broken Eggs— A Study in Contrasts

Recent reports to the Freight Claim Division of the Association of American Railroads reveal a striking difference between the loss and damage claims arising from the handling of eggs on Canadian roads and those moved by carriers in the United States. Although the figures available are not strictly comparable, the differences are of such magnitude as to compel attention.

On the Canadian National, for example, during the six-month period December, 1945, to May, 1946, inclusive, 899 cars of eggs were transported in which only 441 cases were reported damaged in any way. In well over half of the instances of reported damage, the loss was so slight that the road's claim department, by selling the undamaged eggs at retail prices, was virtually able to offset the damage by the difference between the retail prices received and the wholesale prices on which the claims were based.

By contrast, United States Class I railroads handled 43,590 cars of eggs during the year 1945, and incurred total damage of over $1,250,000. In that year claims on eggs amounted to 10.09 per cent of the revenue derived from their transportation and averaged $28.80 per car handled. For 1946, it appears that the record on United States roads will be even worse since, during the first six months of this year, loss and damage on eggs amounted to $876,629, an increase of 64 per cent over the claims paid during the corresponding period in 1945. On a per-car basis, it is likely that claims on eggs will amount to well over $50 on each car of eggs shipped during 1946. Another striking fact is that in 1941, although there were 34,310 cars loaded with eggs for shipment over United States railways, the total claims were $108,083, or only $3.15 per car. On a revenue basis, 1941 claims required only 1.62 per cent of the total revenue derived from the transportation of eggs.

In searching for the cause of this vast difference between the loss and damage ratios of the railways of the two countries, only one significant difference in transportation conditions can be found—the shipping case used. In both countries approved loading methods, designed to produce tight loads, are followed. Nor can it be said that the heavy loading requirements of the U. S. Office of Defense Transportation are a major factor in the high loss and damage rate in this country, for Canadian cars average in excess of 660 cases of eggs per car against the O. D. T. minimum of only 600 cases in a standard RS-type refrigerator car in the United States. In fact, Canadian experience indicates that in excess of 900 cases of eggs can be loaded in a 40-ft. refrigerator car and transported long distances without damage. Neither can railway operating practices in the two countries be shown as the cause, since U. S. and Canadian railway equipment is practically identical in design, construction and maintenance, and there is no difference in operating methods.

When the matter of packing is considered, however, no such similarity of conditions is found. In Canada the fibre case is not used for railroad transportation of eggs. In the United States fibre egg cases greatly outnumber wooden egg cases, although prior to the recent war they were not in general use. Since all other conditions affecting the transportation of eggs are substantially the same, the inescapable conclusion is that the cause of the tremendous damage to eggs transported over U. S. railways is faulty packaging.

During the war, shortages of wood box material made a change to fibre egg cases necessary in both the United States and Canada. But the war ended nearly a year and a half ago. In Canada the railways and the Canadian Department of Agriculture had the courage to maintain pre-war packing requirements for the shipment of eggs, with the result that loss and damage to eggs on Canadian railroads is negligible. In the United States, however, the railroads continue to permit the use of an egg case that has proved itself unfit.

A Fantasy of Figures

The main fact today is that American industry is not in nearly as sound financial position as it is too often prone to think it is. This is complacency that is ominous. It is a common fallacy to suppose that war breeds prosperity. But such a supposition flies in the face of inner conviction and certain knowledge of the awful wastes of war in lives, wealth and resources. How, then, do people derive the notion from the records we compile that everything is happy, healthy and prosperous? I think the answer is that war breeds a fantasy of figures and the fantasy is too often mistaken for fact.

—Enders M. Voorhees, chairman of the finance committee of the United States Steel Corporation.

The M-K-T St. Louis freight-house, as seen from Broadway

Big Freighthouse Comes Back to Life

Thirty-five year old structure on the Katy at St. Louis, Mo., remodeled and re-equipped, becomes "beehive" of activity

THE Broadway freighthouse of the Missouri-Kansas-Texas Lines in St. Louis, Mo., a large structure in which freight is handled on two levels, is again one of the outstanding freight redistributing centers of the country as the result of its recent complete modernization, and a set-up whereby it is now used intensively by both the Katy and the National Carloading Corporation.

The changes brought about at the freighthouse have involved not only extensive alterations within the building itself, but also major improvements in the freight-handling methods employed through the use of a large amount of new tractor-trailer equipment. When built in 1911, the Broadway freighthouse attracted more than ordinary attention because of the unusual overhead freight-handling equipment installed, known as the telpherage system, and it attracted further attention a few years later when this system was removed as being impractical, costly in operation, and involving hazards to safety.

The recent changes in the house included the complete rearrangement of the driveways and platforms on the upper, or street level, the addition of new platforms on the lower, or track level, the substitution of ramps for freight elevators between these levels, and the enlargement and modernization of its office areas.

There are two distinct freight-handling operations in the remodeled building—all of the outbound l. c. l. freight service of the Katy in St. Louis, and all of the St. Louis terminal operations of the National Carloading Corporation, both inbound and outbound. In addition, both the railroad and its tenant operate l. c. l. transfers on the lower level for shipments moving between the East, West and Southwest. The similarity of the requirements of both organizations makes possible the close correlation of their activities to obtain the most efficient use of the building and its equipment.

As a result of the revitalization of the old freight-handling facilities, the completion of which was marked by a formal re-opening ceremony on March 9, shipments through the house have increased to approximately 1,100 tons daily, nearly three times the amount handled immediately prior to the modernization work.

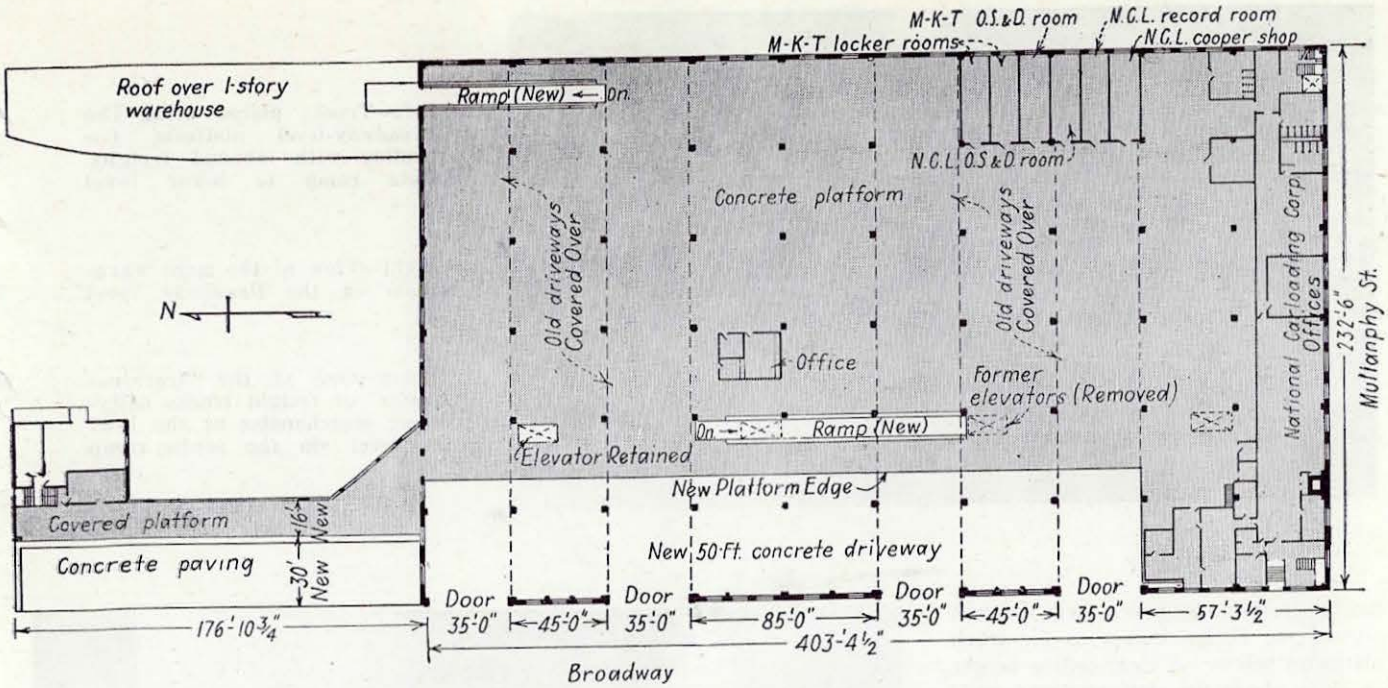
Two and Three-Story Structure

The freighthouse, which was completed in 1911, is essentially a two-story structure, 403 ft. by 232 ft., with a three-story section at one end, 82 ft. by 232 ft., which is used to house offices, storage rooms and service facilities. The building is of steel and reinforced concrete construction with exterior walls of brick, and is located near the industrial center of the city, fronting on the east side of Broadway, between Mullanphy and Mound streets.

At this location the ground slopes downward from Broadway toward the east, and at Second street, parallel with Broadway and immediately along the east side of the freighthouse, the street level is 18 ft. lower than Broadway, which was a determining factor in the original design of the building with two main levels.

In this design, the lower level was given over entirely to trackage and intermediate car-floor-level platforms, with 12 stub tracks entering from the north. The 12 house tracks, together with four team tracks located parallel with and just east of the building, were all at the general elevation of Second street. The south ends of the intermediate platforms were connected by an end platform, except for the platform serving the two most westerly tracks, which was an island platform. The ceiling height of this level is 15 ft., measured from the tops of the platforms, which are elevated 4 ft. above the top of rail.

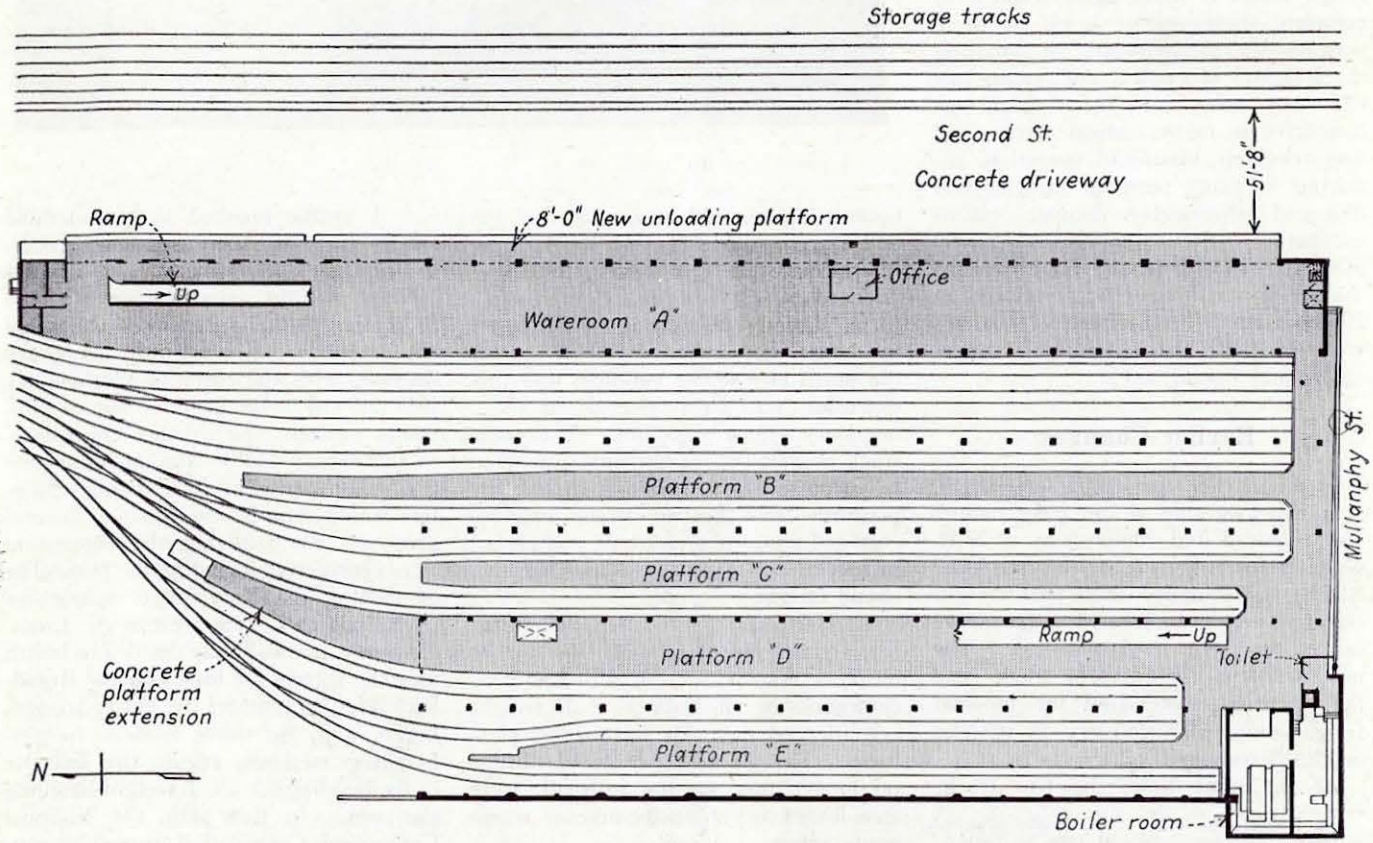
The second floor, known as the Broadway level, was planned as a wareroom, occupying the full length and width of the house. This floor consisted of a series of raised platforms, served by four transverse driveways. The driveways,



Plan of the Broadway level, showing the new platform arrangement and ramps. M-K-T outbound freight is received at the new platform at the extreme left

38 ft. wide, entered the building directly from Broadway on a level grade, and extended to the opposite wall. Each of the platform areas between driveways had a number of hatchways located directly above the various track platforms on the lower level, there being a total of 57 such openings. Overhead, supported from the heavy, specially-designed steel framework of the roof structure, was the telpherage system—an intricate arrangement of monorail runways on which were operated traveling electric cranes, known as telphers.

The arrangement of the runways was such that the telphers could pick up small trucks loaded with freight and carry them to almost any location on

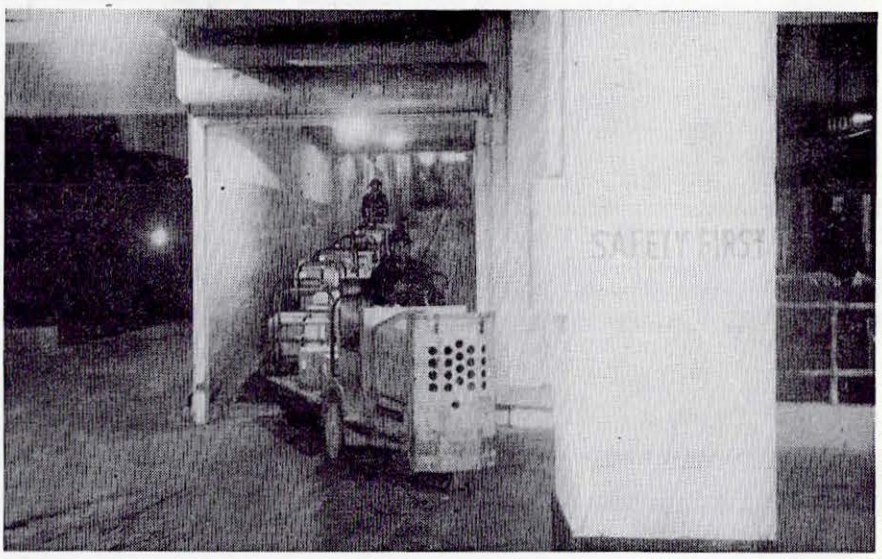


The tracks and platforms on the lower level. The National Carloading Corporation's outbound freight is received along the Second Street platform

Left—Trucks placed along the Broadway-level platform for loading with inbound freight. Note ramp to lower level

Right—View of the main wareroom on the Broadway level

Below—One of the "trackless trains" of freight trucks delivering merchandise at the lower level via the south ramp



the upper level, or lower them through any of the 57 hatchways to the track platforms below. A clear ceiling height of 25 ft. above the platforms made this possible, and loads were moved freely over the tops of shipments standing on the floor.*

The telpherage system installed in the Broadway freighthouse was the second such installation in the country and aroused much interest among railway officers at the time. However, many objectionable features of the system soon became apparent. There were numerous breakdowns, both mechanical and electrical, which in many cases resulted in complete stoppages of work as there was no alternative means of handling the freight. Moreover, the system was extremely noisy, a condition which was conducive to many clerical errors, and was relatively unsafe in operation, resulting in many personal injuries and damaged shipments — damage claims amounting to an average of $1,000 monthly. For these and other reasons the telpherage system was removed in 1914, at which time extensive changes were made in the freighthouse arrangements and operation.†

Earlier Changes

In this earlier remodeling, one track, near the west side of the freighthouse, was removed and replaced by a 27-ft. wide platform, known as Platform "D," which was equipped with four freight elevators, each so located as to serve one of the upper-level platforms. The new platform, its adjacent tracks and the elevators, were used for inbound freight only, with delivery to vehicles on the Broadway level.

At the same time, the two tracks nearest the Second-Street side of the house were removed and the narrow intermediate platform serving them was widened to 42 ft. This widened platform, directly along the east side of the house, was extended 180 ft. beyond the north end of the building, and this extension was entirely enclosed by a one-story frame structure. The team track nearest the freighthouse was then taken up to allow vehicles to reach the platform from Second street and the enlarged platform as a whole was placed in service exclusively for receiving outbound freight.

This arrangement was continued for some time, but a gradual decline in business resulted in the ultimate concentration of all Katy l. c. l. freight activities on the wide lower-level platform. The Broadway-level platforms, no longer used by the railroad, were then leased to various tenants for warehouse space.

In the period immediately preceding the recent war, a marked increase in l. c. l. traffic resulted in considerable congestion in the then used l. c. l. facilities and, as a relief measure, the road's inbound freight activities were moved to another building nearby. The relief obtained was, however, only temporary because, with the entry of this country into the war, a further increase in shipments caused even greater congestion, to the extent that it was apparent that the freighthouse in its existing condition would soon be inadequate. Several proposals for relieving the congestion were considered, including the possibility of moving the Katy's l. c. l. transfer operations to a point west of St. Louis. However, it was finally decided to terminate the warehouse leases on the Broadway level, to remodel the entire freighthouse, and, by using modern freight-handling methods, regain the full use of the building for l. c. l. freight-handling purposes. In this plan, the National Carloading Corporation agreed to concentrate in the building all of its terminal operations in St. Louis.

* A detailed description of this system appeared in the Railway Age Gazette of June 23, 1911.

† The defects of the telpherage system and the changes made in the freighthouse when this system was removed were described in the Railway Age Gazette of September 4, 1914.

To increase the usefulness of the large upper wareroom, its platform and driveway arrangement was entirely changed to form one large continuous platform adjoining a new interior driveway, or undercover tailboard area, along the Broadway side. Also on this level, to increase the tailboard area, a covered platform extension, 177 ft. long, was built from the north end of the building, along Broadway, with direct connection to the main wareroom floor. On the lower level the alterations were on a smaller scale, and consisted primarily of platform changes. All of these changes were predicated upon a complete change in the means of handling freight within the house, to one involving the almost exclusive use of "trackless trains" (tractors and trailers) for all movements on each level and between levels. To make this possible, two long ramps were constructed between the two levels for inter-level trucking, and three of the four old freight elevators were removed, leaving one for use in handling special shipments not readily handled on the ramps.

Platforms

The new truck back-up area serving the Broadway wareroom is located along the west side of the building, and is 319 ft. long by 50 ft. deep, providing full cover for trucks and trailers at the platform edge and ample room for them to maneuver into position after passing through the four wide doorways in the front of the building. To make room for the new back-up area, the front 50 ft. of each of the original platforms was removed and the hatchways in these areas were sealed. The four doorways serving the new back-up area were not changed, these being 35 ft. wide and fitted with doors of the twin-sliding, hand-operated, type.

In converting the remainder of the Broadway level into one large platform, the former transverse platforms were extended over the old transverse driveways, and all of the old hatchways were sealed. The new platform sections are 4-inch reinforced concrete slabs supported on an all-welded structure of transverse beams and posts made from 66-lb. scrap rail. Scrap rail was also used to advantage in sealing the old hatchways, being used as beams to support the fill-in concrete slabs in these areas.

The changes on the lower level were confined principally to the construction of additional platforms. On the Second street side of that level a new 8-ft. wide concrete platform was built along the full length of the freighthouse and the low-level frame extension — approximately 550 ft. In addition, team track No. 3, nearest the building, was shifted 19 ft. farther from the building to permit the widening of Second street to 51 ft. 8 in., and the street was resurfaced with concrete. Other work on this level included the extension of the platform between Tracks 10 and 11, and the widening, as necessary, of the south-end connecting platform to permit the two-way operation of the trackless trains in passing to and from the various track platforms. This end platform was also extended over the ends of Tracks 11 and 12 to gain access to the intermediate platform immediately west of these tracks, which was formerly an island platform.

Ramps

The two new ramps are located in diagonally opposite corners of the building. That on the Broadway side, known as the South ramp, ascends northward on an 8.23 per cent grade from Platform D. The other ramp, in the northeast corner of the building, has an 8.98 per cent grade and extends down to the enclosed low-level platform north of the freighthouse proper.

The ramps are of similar construction, with floor slabs of six-inch reinforced concrete supported on beams formed of 66-lb. rail, and have a width of 8 feet, which is divided into two traffic lanes by means of a center curb. The South ramp, and that portion of the North ramp within the confines of the freighthouse proper, are suspended from the upper-level floor by means of 1-in. steel rods, while the lower part of the North ramp, outside the freighthouse, is supported on rail posts. Both ramps are fully enclosed on the sides with No. 6-

gage steel sheets, to a height of 7 ft., above which the walls and ceilings are of corrugated asbestos-cement sheeting. Protection of the center curbs, as well as of side curbs on both sides, is afforded by steel angles. A two-inch pipe safety railing extends around the exposed ramp openings on the upper level.

The original platforms on the upper level were surfaced with maple flooring, and this flooring, still in good condition, remains wherever the old platform areas remain. All new platform areas on the upper level were constructed of concrete, as already mentioned, but, with maple flooring unobtainable, they, as well as the ramps, were given a hardened wearing surface made with Masterplate cement, to which carborundum was added. Likewise, all new platform areas on the lower level were constructed with a hardened wearing surface.

Office Areas

The three-story section at the south end of the freighthouse is used for offices and storage space. Originally the third floor was occupied by the Katy's local freight office, but it was later taken over by the auditor of revenue, and the freight office was moved into new quarters on the Broadway level, in an enclosed space 30 ft. wide, built across the south end of the wareroom.

In the recent changes, the office areas were further enlarged by the construction of a mezzanine directly over the enclosed Broadway-level offices, taking advantage of the 25-ft. ceiling height of this level. The mezzanine is of frame and plaster construction with steel floor-beams, suspended from the framework above, and is subdivided into several rooms, painted in light, cheerful colors. This mezzanine is used by the Katy's local freight offices, while the older offices on the main level have been redecorated and are now occupied by the National Carloading Corporation.

Equipment and Operation

The latest types of freight-handling equipment have been purchased for use in the remodeled freighthouse, including four International "Shop Mules," three Mercury tractors, and 375 four-wheel Mercury trailer trucks, equipped with rubber tires, ball bearings and automatic couplers. The seven hauling units are gasoline-engine powered, and, like the trailers, are mounted on rubber tires and are fitted with automatic couplers. These units are capable of handling 6 loaded or 12 empty trailers on the ramps. For short movements, such as storing freight in cars or trucks, 185 rubber-tired hand trucks of the conventional type are available at the house, and for handling heavy and bulky shipments, two Yale & Towne hydraulic hand lifts of 8,000-lb. capacity are provided.

To avoid confusion, the operations of the M-K-T and the National Carloading Corporation are conducted at separate locations within the house, but to secure the maximum efficiency from the freight-handling equipment, all of this equipment is used jointly. The lower-level, Second street platform is used alone by the National Carloading Company, exclusively for the receipt of its outbound freight. The Broadway platform, inside the building, is also used by this company, but only in the handling of its inbound freight. M-K-T outbound freight is received at the new platform extension on this level. The large wareroom is used by both companies for temporary storage, the Katy using the north half and National Carloading the south half.

The total capacity of the present 10 house tracks on the lower level is 101 cars, with the first seven tracks from the Second street side being used by the carloading company, and the remaining three by the Katy. The three tracks formerly used as team tracks are now used only for storage and overflow cars.

Both companies use the lower level at the house for transfer operations as well as for their local freight activities, the Katy consolidating bulk cars received from several eastern roads with freight consigned to points in the West and Southwest, and the carloading company handling similar transfer shipments from points as remote as Washington, D. C., and Boston, Mass.

Definite Schedule Followed

All operations at the freighthouse are conducted on a definite schedule. Loaded cars and the necessary empties are placed on the house tracks before midnight, when the first of several groups of stevedores reports for duty. At 7 a.m. the house is opened for general business, and throughout the day trucks arrive at the platforms to pick up or deliver shipments. Meanwhile, the work of loading and unloading cars continues until 6 p.m., when the stevedores go off for the day, and the house is closed to truck receipts and deliveries. However, empty trucks placed along the wareroom platform before 6 p.m. are loaded during the night with National Carloading's inbound freight for movement out to consignees the next morning.

Beginning at 4:45 p.m., the first of three switch engines arrives at the house to take out cars scheduled for delivery to specific trains or to various freight yards around St. Louis. A daily average of 60 loaded cars is forwarded in this manner, the majority moving via the Katy, although cars are also forwarded via the Frisco, the Cotton Belt, the Wabash and the Missouri Pacific.

Pickup of Katy freight in the St. Louis area is handled by contract draymen, and during the day from 170 to 200 of their trucks arrive at the outbound platform with shipments. National Carloading's local service, inbound and outbound, is also done by contract truckers, and the daily traffic of trucks to and from the house averages between 200 and 300—some of these trucks operating to and from points as distant as 300 miles.

The freighthouse remodeling was done by the J. S. Alberici Company, general contractors, St. Louis. The entire project was developed under the supervision of K. H. Hanger, chief engineer of the M-K-T, assisted by W. T. Peyton, superintendent of stations, and A. L. Sparks, architect. All operations at the freighthouse are under the immediate supervision of T. K. Thornton, general agent.

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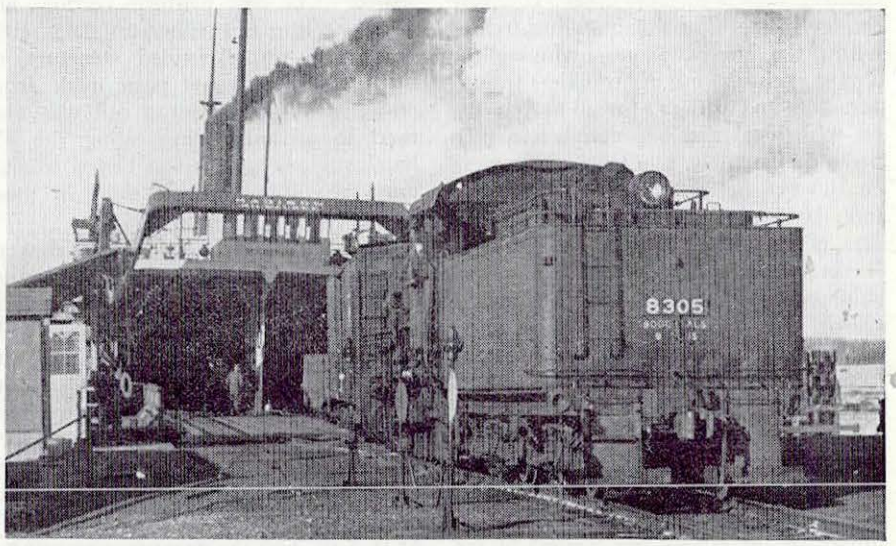


A Grand Trunk Western switcher placing Milwaukee-bound cars aboard the road's Lake Michigan ferry at Muskegon, Mich.

Communications Section Meets in Detroit

Train communication, radio between offices and other modern systems were discussed at three-day session which included exhibits of equipment by manufacturers

TRAIN communication, radio telephone service between offices and increased efficiency of communication facilities in general were subjects dealt with at the annual convention of the Communications Section of the Association of American Railroads in Detroit, Mich., November 19-21. During the war years, this Section held no annual meetings but the committees completed their assignments as usual, and the Committee of Direction met each year to take action on the reports. Thus the Section served its members effectively during the war, and is now entering on an expanding program of increased usefulness. Interest in these activities was evidenced by the attendance of 190 railroad representative members, 238 affiliated members and 83 ladies, totaling 511, which was a larger registration than at any previous convention of this Section. A. S. Hunt, chief engineer, communications and signals, Baltimore & Ohio, presided as chairman; with W. D. Neil, general manager communications, Canadian National, as vice-chairman.

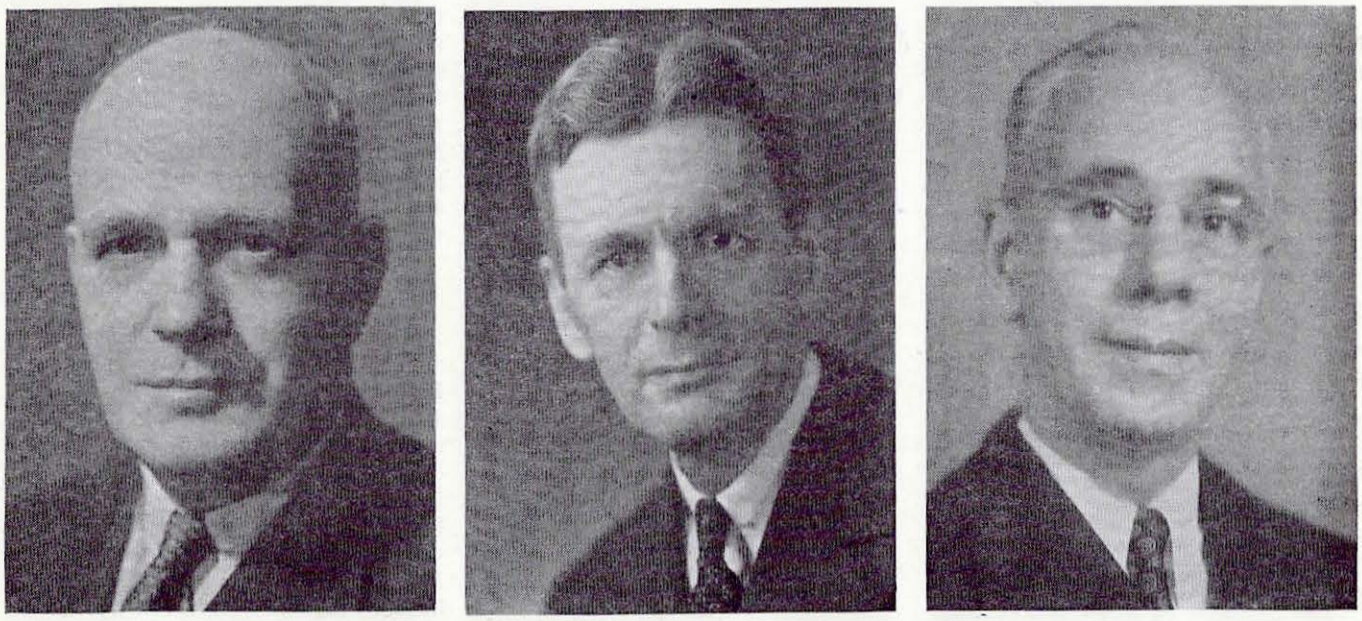
The program of the convention included the presentation of 14 committee reports, three addresses and four technical papers on recent developments. The addresses were made by Brigadier General P. F. Yount, assistant chief of transportation of the United States Army; C. L. Jellinghouse, vice-president, New York Central; and J. H. Wofford, chief of applications and hearing section, Engineering division, Federal Communications Commission. The technical papers were: "Micro-Wave Relay Systems", by H. A. Affel, toll transmission development director, Bell Telephone Laboratories, Inc., and F. B. Bramhall, transmission research engineer, Western Union Telegraph Company; "Space Radio", by W. L. Webb, director engineering and research, Bendix Radio division, Bendix Aviation Corporation, and W. D. Hailes, electrical engineer, General Railway Signal Company; "Tape Relay Methods for Printing Telegraph Networks", by Sidney Sparks, vice-president and traffic manager, RCA Communications, Inc.; and "Inductive Communications Systems", by G. W. Baughman, chief engineer, Union Switch & Signal Company, and C. N. Kimball, Railway Radiotelephone and Signals, Inc.

Although much of the information presented in the committee reports and papers was highly specialized and technical, nevertheless, numerous statements were interwoven concerning new developments in and the utilization of modern communication equipment of interest to railroad men in all departments who use such facilities. The following, therefore, is a summary of those items of general railroad interest, with brief reference only to plans, specifications or discussions of a technical nature.

Abstracts of Addresses

In his opening address, Chairman Hunt explained that the railroads have conducted tests and experiments with radio for more than 30 years, but that radio frequencies were not available for permanent use until quite recently, and that from now on there will be rapid development of this type of communication on the railroads.

"Unfortunately," Mr. Hunt said, "the public has been led to believe that the simple application of radio on trains will prevent all train accidents. This is not true. A careful man is still the best safety device known. However, radio will eventually be improved upon and possibly will supplement our present signaling systems and safety devices in that it will be possible to give advance warning to oncoming trains whenever there is some irregular condition which might cause an accident. It is also expected that it will become practical for passengers to talk to their homes or places of



Officers of the Communications Section, A. A. R., including (from left to right): A. S. Hunt, chairman, chief engineer communications and signals, Baltimore & Ohio; A. S. Neil, vice-chairman, general manager of communications, Canadian Pacific; and W. A. Fairbanks, secretary Communications Section

Main-Line Train Communication Installations

Railroad and Location	Type (*)	Number of Stations: Fxd.	Cab.	Loco.	Cost of System	Annual Charges	Annual Savings	Remarks
Atlantic Coast Line								
Rocky Mount, N. C., to Florence, S. C. (Via Wilmington, N. C.)	I	6	14	18	$	....	....	Under Construction
Chicago, Milwaukee, St. Paul & Pacific								
Seattle, Wash., to Harlowton, Mont.	R	0	2	3	8,891	....	....	Under Construction
Milwaukee, Wis., to Kansas City, Mo.	R	0	5	5	21,366	....	....	Under Construction
Pennsylvania								
Harrisburg to Pittsburgh, Pa.	I	13	70	250	1,086,000	....	....	Under Construction
Trenton to Phillipsburg, N. J.	I	2	10	10	60,000	....	....	Train movements expedited

business while en route. There is a distinct possibility of the use of radio beam between important points to handle trunk circuits where there is a large volume of business, thus eliminating the necessity for heavy pole line construction. Radar, as used by the military services, in its present state of development cannot be used to any particular advantage by the railroads. Two-way loud-speaker systems are being installed in major yards. This method of communication has proven of value and no doubt many installations will be made in the future."

Brigadier General Yount, in his address, said: "If the United States is to retain world leadership, the nation must maintain a railroad system which is highly efficient and financially sound, and one that will be capable of meeting new peaks of performance both in peace and in war." Warning that America may be the first target of a future aggressor and that another war would come suddenly and swiftly, General Yount said that "the transportation industry, along with every other segment of our national economy, must be ready to act as swiftly."

Pointing out that "there never again will be time for long preparation and for mobilization if war should come," the army officer continued: "Modern war has developed to the point where military preparedness alone is not enough. Industrial preparedness is an integral part of the national security program, and our transportation industry is an essential element of such industrial preparedness."

Mr. Jellinghouse, in his comments, said: "The speed and accuracy with which communications are transmitted have direct bearing on the relations of the railroads with the traveling and shipping public. Economy in transmission and operation in itself and in its relations to transportation costs is another important factor. The New York Central was one of the pioneers in the testing and use of radio. Surprisingly, this goes back to 1920, when the first tests were conducted on the New York Central by the United States Signal Corps. Over the intervening years other installations and tests were made. Of course, the development was also carried on by other railroads. The public generally has not realized this.

The war has brought many improvements, and application of the radio on an ever-growing scale is a matter of time. The radio must justify itself, however, by providing more economical and efficient service in yard and road operation. It is one thing to show actual economy in so many dollars and cents, and another thing to justify its use purely on the assumption that it is more efficient, not measurable in money. Experiments are being conducted on both bases and we shall soon learn where increased installations can be made to best advantage."

Mr. Woffard, in his remarks, explained the proper methods for making applications to the Federal Communications Commission for use of radio on railroads. He said that the use of television channels by the railroads must wait until television's requirements are clearly established. He chided the railroads for their failure to use the channels available when he said: "The sharing problem is not particularly acute at the present time for the railroad radio service. The possibilities of the 60 exclusive channels now available for the service have not been exhausted. For example, since the service was established on a regular basis, only 18 of the nation's railroads have licensed equipment and, as of October, the equipment licensed includes only 39 land stations and 531 mobile units scattered across the country.

"I should like to stress that the commission has indicated its approval of radio for railroad use by making liberal provision for it and by establishing a separate set of rules for the industry. In general, the trend of commission policy is to establish minimum licensing procedures in order that the necessary paper work will be reduced to a minimum and handled in the most expeditious manner possible."

Yard and Terminal Installations

Railroad and Location	Type (*)	Number of Stations: Fxd.	Loco.	Cost of System	Annual Charges	Annual Savings	Remarks
Baltimore and Ohio							
New Castle, Pa., yard	R	1	3	$ 7,635	$ 600	....	Facilitates operation — foggy conditions
Florida East Coast							
Miami, Fla., terminal	R	1	11	15,278	5,050	$15,698	Improved switching
Great Northern							
Allouez, Wis., yard	I	1	2	4,091	630	....	Expedited — particularly in foggy weather
Gulf, Mobile & Ohio							
Meridian, Miss., yard	R	1	2	3,594	....	$25/day (Est.)	Under construction
Louisville & Nashville							
Latonia, Ky., yard	I	1	3	3,746	360	2,100	Facilitates humping—enhances safety when using 2 or more hump engines
New York Central							
Selkirk, N. Y., yard	R	1	4	10,700	1,300	12,420	Expedites operations
Norfolk & Western							
Roanoke, Va., yard	I	1	3	13,000	270	....	Yard operation improved
Pennsylvania							
Altoona, Pa., freight yard	I	2	3	5,653	848	1,800	Expedites humping operations
Enola, Pa., freight yard	I	2	9	9,325	1,399	2,798	Expedites humping operations
Pitcairn, Pa., east yard	I	1	6	7,014	1,345	9,936	300 humping hrs. per year saved
Indianapolis, Ind., yard	I	1	3	3,226	974	7,591	Great aid to humping
Columbus, O., Yard B	I	1	3	2,173	1,149	456	Great aid to humping
Pittsburgh, Pa., Strip Dist.	I	3	2	15,000	....	2,294	Expedites yard & industrial switching
Term. R. R. Ass'n of St. Louis							
E. St. Louis, Ill., hump yard	I	1	1	3,289	....	....	.....

* Induction—I; Radio—R.

Note: This tabulation is incomplete, as there are some main line installations now in progress of construction, or in partial operation, and there are numerous yard and terminal installations in service where the railroads involved did not feel that sufficient data were on hand to answer the questionnaire.

Train Communication

The report of the Committee on Radio and Allied Communications as applied to Railroad Operations included considerable information concerning train communication. Information was given concerning 35 test installations of radio and inductive communication on trains, between trains, and between trains and wayside stations; on the road as well as in yard and terminal areas. This report included the following list of typical circumstances under which train communication in road service may increase the efficiency of train operation:

(1.) Notifying engineman when proper train line pressure has been reached at the rear of the train.

(2.) Notifying the engineman as soon as the rear of the train clears crossovers, switches, etc., thus permitting full speed sooner than would otherwise be possible.

(3.) Increased efficiency in notification of hot boxes, and facilitating setting out defective car and recoupling the train.

(4.) Notifying engineman of flagman's return to the train, saving time and eliminating uncertainty.

(5.) Facilitating control of Diesel-electric locomotives through more effective coordination in manipulating controls.

(6.) Facilitating discussion between the conductor and engineman when unusual conditions are encountered.

(7.) Advising engineman concerning time to start, to stop at specific points, etc.

(8.) Advising engineman of sticking brakes.

(9.) Conductor advising engineman to stop train, thus avoiding hazards incident to the application of air from rear of train.

(10.) Engineman advising conductor where he is going to take water; when train to be met is in the clear on siding; when difficulties develop with engine, etc.

Communication with mobile units greatly facilitates operations in yards and terminals. Instructions in humping and classification service can be given directly to enginemen. Operations are not impeded by conditions of fog, smoke, snow, etc., which obscure light and hand signals. Speed of operations can be increased, and the engineman can check back on his instructions at all times. In transfer operations locomotives can be dispatched while on the move. In emergencies corrective action can be taken more quickly and changes in instructions issued as needed.

The committee presented a tabulation of certain yard and train communication projects in service or under construction, including information on the benefits and economic advantages, as shown in the table on the preceding page.

Other Committee Reports

The report of Committee I dealt with outside plant equipment. A discussion on the treatment of poles indicated that there will be a shortage of creosote, and, therefore, that fewer poles can be treated. Extensive tests have been made of line wire insulators made of rubber, rather than the customary glass. The advantages of the rubber insulators are the elimination of losses due to breakage, and better insulation under certain atmospheric conditions.

The Committee on New Devices and Materials has issued four bulletins including illustrated explanations of 46 new items of communication equipment. Some of the new devices of special interest are: High-fidelity loud-speaker, reel rollers, ground resistance tester, thermostatic solder iron, sealed-in-glass selenium rectifier, cable-splicing machine, pumpless blow torch, and pipe locator.

The Committee on Plant Operation submitted reports on several subjects including means of handling communications in and between yards, terminals and office buildings, and a detailed list of explanations on how to use telephones most effectively. For example, when talking, the mouthpiece should be directly in front of and close to the lips. If the lips are out of line with the mouthpiece as much as 30 deg., the results are only 1/80 as good as if they were in line with and close to the mouthpiece.

The report of the Committee on Research and Development included an extended explanation of machines for digging holes and setting poles. Another report explained the recent improvements in amplifiers and loud-speakers for use in telephone train dispatching circuits.

T. & T. Appliance Association

Coincident with the Communications Section session, various members of the Telegraph and Telephone Appliance Association displayed modern railroad communications equipment in a total of 19 exhibits. Officers of the association during the past year included J. A. Hamilton, chairman, sales representative, Kerite Insulated Wire & Cable Co.; F. R. Winter, vice-chairman, Ohio Bell Telephone Company; and G. A. Nelson, secretary-treasurer, vice-president, Waterbury Battery Company.

The American Phenolic Corporation, Chicago, displayed coaxial cables, connectors, fittings, conduit, antennas, radio components and electronic plastics. The Lenkurt Electric Company, San Francisco, for whom the Automatic Electric Sales Corporation, Chicago, is distributor, displayed telephone and telegraph carrier equipment for providing extra channels for voice transmission, automatic toll dialing, automatic supervision and telegraph messages.

The Bendix Radio Division of the Bendix Aviation Corporation, Baltimore, exhibited two-way space radio and yard loud-speaker equipment. The Collins Radio Company, Cedar Rapids, Iowa, displayed a railway passenger car radio receiver for passenger entertainment. Communication Equipment & Engineering Co., Chicago, displayed telephone equipment, including rubber pole line insulators, repeating coils, voice-frequency telephone repeaters and other equipment. The Fansteel Metallurgical Corporation, North Chicago, Ill., showed rectifier power units and battery chargers for railway telephone and telegraph communications service.

The Farnsworth Television & Radio Corp., Fort Wayne, Ind., exhibited two-way space radio train communication equipment, as well as passenger car radio entertainment distribution systems for passenger entertainment. The Federal Telephone and Radio Corporation, Newark, N. J., displayed a single-channel and three-channel carrier telephone system, as well as a molded plastic telephone. The Galvin Manufacturing Corporation, Chicago, exhibited very high frequency two-way radio train communication equipment.

The General Railway Signal Company, Rochester, N. Y., in association with the General Electric Company, Schenectady, N. Y., showed space radio and inductive carrier train communications systems. Graybar Electric Company, in association with the Western Electric Company and Bell Telephone Laboratories, Inc., showed two-way selective radio equipment, a carrier telegraph system, telegraph repeater, teletypewriter subscriber set, telegraph station test set and various other equipment.

The Gray Manufacturing Company, Hartford, Conn., displayed Audograph equipment for recording railroad communications on disk type machines, while Frederick Hart & Company, Inc., New York, showed magnetic wire and film-type recorders. The National Telephone Supply Company, Cleveland, exhibited pole line specialties for communications and power line construction, including Nicopress sleeves, tools, cable clips and various other material.

Railway Electronics, Incorporated, New York, exhibited electronic telegraph repeater equipment, while Railway Radiotelephone & Signals, Inc., Washington, D. C., distributors for the Aireon Manufacturing Corporation, Kansas City, Kan., displayed space and inductive railway radio-telephone equipment. Included in the Aireon exhibit was an exhibit of the Ferris Instrument Company, Boonton, N. J., which showed signal generators, strength meters and crystal calibrators for testing standard sensitivity of radio receivers used in railroad service.

The Stromberg-Carlson Company, Rochester, N. Y., exhibited yard and station sound system equipment, as well as telephone equipment, such as handsets, wire, fuses and relays. Included in this exhibit were Cook Electric Company telephone cable terminal boxes, protectors and other telephone construction and maintenance supplies, Stromberg-Carlson being a distributor for this company. Also displayed in this exhibit was a device known as a Roll-A-Reel, for handling heavy wire and cable reels, manufactured by Roll-A-Wheel, Cincinnati, and for whom Stromberg-Carlson is also distributor.

Webster Electric Company, Racine, Wis., showed Teletalk intercommunication and dispatching systems for yards, terminals and offices, while the Westinghouse Electric Corporation, Pittsburgh, exhibited two-way space radio communication for train communication.

Rail Labor Announces Post-War Program

Report of committee headed by George M. Harrison sets out aspirations for improvement of employees' position and advises management on problems and policies

WASHINGTON, D. C.

ASPIRATIONS of the Railway Labor Executives' Association for improvement in the position of railroad employees and its advice and recommendations to railroad management with respect to that matter and other problems and prospective policies of the post-war period are set out in a report on "Labor and Transportation," which was made public last week. The report, a document of 46 double-column pages, dated May, 1946, was issued in the name of R.L.E.A., but the November 23 issue of "Labor" revealed that it resulted from studies made by a committee of the association headed by George M. Harrison, grand president, Brotherhood of Railway Clerks, and consisting also of Harry W. Fraser, president, Order of Railway Conductors; E. E. Milliman, president, Brotherhood of Maintenance of Way Employees; Harvey W. Brown, international president, International Association of Machinists; and A. E. Lyon, executive secretary of the association.

Throughout the report are various suggestions for labor-management consultation and cooperation. "Virtually all of the suggestions herein made," the report says in that connection, "contemplate close collaboration between management and labor all the way up and down the line and it is not too much to say that such consultation and cooperation is absolutely necessary to the success and prosperity of the railroads in the difficult years ahead. It is hoped that railroad management will accept the concept that the present or future problems of the railroads and their employees in which they have a broad and common interest deserve mutual consideration and action."

Good Business the Key

Meanwhile, the report recognizes that improvements in the position of labor must contemplate increased production. "The program here discussed," it says, "will not get very far if the people of the country and their institutions, both private and public, do not establish and maintain a high level of industrial and agricultural activity. The necessity of doing so is the basis of the program. Transportation, if intelligently managed, can make a very substantial contribution to high industrial and agricultural production, just as the intelligent management of agriculture and industry can make a most substantial contribution to the maximum utilization of our tremendous transportation system. And one of the most important measures to this end is to make certain that labor . . . not only does not lag in the economic advance of the nation but will move forward regularly and consistently in keeping with the increase in productivity which a well managed national economy can assure."

The report is divided into four main parts, the first three of which deal with the transportation industry generally, discussing in turn the nature of the industry, labor in transportation, and a peace-time program for transportation labor. Part IV sets out "Rail Labor Objectives and Policy in the Post-War Period." There is found R.L.E.A.'s recommended program of "joint action to secure legislation favorable to general railroad prosperity."

Recommendations

This program is set out as follows: (1) Amend the Interstate Commerce Act to permit the fixing of rates by the conference method; (2) legislation to permit the accumulation of funds for deferred maintenance with safeguards; (3) liberalization of railroad retirement and unemployment insurance benefits (supporting argument here called upon management to reexamine its position on the Crosser bill which was enacted after the report was prepared); (4) establishment of a national railroad workers' compensation system.

The foregoing is followed by other recommendations for the adoption of measures "designed to stabilize railroad employment," and still others to bring about "improved labor standards." The former embody suggestions for the use of deferred maintenance reserves if legislation to permit their accumulation is enacted; call for adoption of "an intensive five-year modernization program"; and recommend that all possible railroad work, including construction of new equipment, be done by railroad employees. Also it is urged that increases in railroad debts be discouraged, that the Railroad Retirement Board's employment service be continued, and that a joint committee of labor and management be created "immediately" to study "the practicability of a guaranteed annual wage plan for the railroad industry."

To bring about "improved labor standards," R.L.E.A. would expand railroad safety programs; improve entrance-wage rates, working conditions, and overtime standards; establish "adequate training programs"; "modernize" railroad personnel practices; and make provision "where needed" for adequate facilities such as housing, commissaries, lockers, shower rooms, etc. Closing sections of the report call for a speeding up of Railway Labor Act procedures, and the "promotion of improved labor relations."

It is in discussing the latter subject that the report makes the reference, noted above, to the fact that virtually all of its suggestions contemplate collaboration between management and labor. It is further asserted that individual railroads and organizations of their employees have demonstrated that "the organized relationship between railroad management and railroad labor established basically for the purpose of preventing labor disputes, can, if sincerely accepted, be enlarged to realize other benefits of value to railroad management and labor."

Cooperation Suggested

"There were," the report continues, "instances before and during the war when the railroads, as a whole, and their employees, through the standard railroad labor organizations, have agreed upon joint action aimed at the overall good of their industry and those it serves. As a matter of fact, the concept of frank and wholehearted cooperation between labor and management in the interest of war production had its origin in the railroad industry over 20 years ago.

"So, in preparation for dealing effectively with the post-war problems of the railroads, both management and labor can review their experiences and determine to what extent management, through its supervisors and officials, can work with railroad labor through its executives and chairmen, as well as with

the men. Specific plans for systematic consultation, discussion and action on various aspects of the industry's post-war problems should be devised and placed in effect. . . .

"A good beginning on closer labor-management cooperative relations was made in a series of meetings some months ago between labor executives and top railroad officials. In the final analysis, however, it will be impossible to achieve the objectives herein stated by consultative discussion and actions among top executives alone. The same pattern of joint action can be applied to problems which can be considered regionally, on individual systems, or by departments, offices, shops and divisions. The national meetings have set the example. It should be followed all the way down the line in every unit organization of the industry.

"The magnitude of the problems of the railroads, both labor and management, in the post-war era, is a challenge to the entire industry and can be solved only through the wholehearted support and cooperation of every railroad official and every railroad labor spokesman and worker. If the managers and labor executives of our railroads will adopt this approach in dealing with the challenge that confronts them, they will enter the struggle with their competitors minus one of the most serious handicaps which threatens most industries, namely, labor misunderstandings and strife."

For Equitable Regulation

With respect to transportation labor generally, the report makes 18 recommendations, some of them being broadened versions of the railroad-labor recommendations while others are different. Among the latter is a proposal for the development of state and federal regulatory programs which would enable each agency to "grow naturally and prosper within the limits of its proper and legitimate sphere" give no undue legislative or regulatory advantage to one agency as against another, and afford "adequate protection" for labor against unfair competition.

Here also it is suggested that efforts be made to promote the establishment of "improved government facilities and activities for obtaining and analyzing statistical and other information of particular concern to each branch of transportation labor"; that state and federal legislation relating to hours, minimum wage rates, safety, workmen's compensation, etc., be extended "to all workers in all branches of transportation"; that the job-protection principle be extended to all branches of the industry as it now applies to railroads; that "minimum manning needs of equipment, such as locomotives, trains, street cars and buses, trucks, and ships" be "safeguarded in the interest of safety and service"; and that consideration be given to the establishment of a "national transportation institute."

Presumably the latter would be a labor venture since the specifications indicate that it would be designed to correlate and interpret factual material bearing on transportation—branch by branch—as assembled by the various government agencies, universities, private foundations, etc.; to cooperate with such agencies and "stimulate" them; and to "assist spokesmen of transportation labor organizations when they are called upon or have occasion to make appearances before or present statements to public bodies." Labor organizations in the transportation field are further called upon to "develop adequate public relations activities on behalf of transport labor"; and to sponsor studies "of each branch of transportation in the light of the general transportation program suggested here, and supplement it with a special program for each branch."

Would Equalize Conditions

"The emphasis of the general transportation labor program for the peace period ahead," says this chapter's summary, "should be chiefly on safeguarding and promoting the welfare of the employees of the industry to the end that no branch of transportation, by virtue of the exploitation of its particular employees, in any way is enabled to compete unfairly with the other branches of transportation. Such equality of labor treatment by all branches of the industry can be achieved if the accredited labor unions of the employees of each branch can be induced to observe the same general program of cooperation."

Each of the report's recommendations is supported by argument, and there is also in the document much other comment and discussion. The "basic importance of transportation" is stressed at the outset, it being noted that this was demonstrated by the war which "also brought into relief the sound, as well as the weak, features of the American transportation system." In the latter connection, it is asserted, "for example," that the railroads "found the unprecedented war traffic almost more than they could handle."

Congestions in freight operations, it is said, were avoided "only by careful government control of shipments to ports and by generous use of government diversion authority." Meanwhile, passenger service "deteriorated," with few roads "able to keep trains on time and few indeed can be said to have rendered adequate service." Nevertheless, it is conceded that the railroads "did move the traffic," and R.L.E.A. adds that it does not lose sight of the magnitude of the job that was done when it observes that "the machine creaked a little," and suggests that "steps should be taken to improve service in the future."

Railroads to Remain Dominant

On the competitive outlook generally it is stated that while railroads do not possess either the speed of the airlines or the flexibility of the trucks, they "do possess a speed and flexibility adequate for most purposes and will probably continue to enjoy their dominant position in modern mass transportation." At the same time, the railroads are found facing post-war problems not shared in all instances by other branches of transportation. Explaining itself on the latter score, the report says that "an inadequate betterment program in the pre-war years, coupled with the intensive use of railroad equipment during the war, now presents an acute improvement problem."

Mention is also made of government assistance to highway, air, and water transport which is "an unfavorable competitive factor from the railroad standpoint although in many respects comparable to the help they themselves had received in their early days." It is further asserted that railroads will have "serious financial problems," for the "necessary betterment program will call for heavy contributions from financial reserves and any substantial recession in traffic will leave many more railroad systems in serious financial difficulties unless ways to afford relief are found."

Similar general appraisals are made of the outlook for other branches of the transportation industry, it being said of the airlines that the availability of surplus military equipment "has permitted them to take an early lead in post-war competition." Then, however, comes a warning that the airlines "face the danger of too rapid expansion and unwise financing problems peculiar to a new and unsettled industry." Of Pullman service, it is said that much of the sleeping-car equipment "is outmoded and like the bulk of railroad equipment must be replaced as soon as possible." The Railway Express Agency is found to be rendering "an ideal service for the transportation of all types of commodities which require expedition, special care and safety in handling"; and the "close dependence of express upon other forms of transportation renders the post-war transportation situation a matter of direct concern to all express workers no less than to other transportation workers."

With respect to government policy in the field of domestic transportation, the report asserts that each agency

should be enabled "to render adequate services to the public at economically sound rates, to provide proper working standards for employees, and to earn a reasonable return on investment." However, this assertion is followed by a declaration that the public interest "requires a national policy which will encourage the development and modernization of certain transportation facilities such as airports, highways, waterways and the like."

Arguments in support of this proposition include references to the military role of the airplane, to the fact that many waterway projects are by-products of flood-control and reclamation developments, and to the use of highways by the "general public" for whom the roads are "intended primarily." Mention is made in passing of the contention that such assistance to competing forms of transportation places the self-supporting railroads at a serious disadvantage. "This contention," the report concedes, "has some merit, and it is probable that one of the most difficult post-war transportation problems will be to find ways of equalizing these advantages of the various branches of the industry."

Among "disadvantages of transportation employment," the committee lists what it considers, to be a tendency of wages to lag behind those of other industries; the exemptions from the Fair Labor Standards Act; "irregular and undesirable hours of duty"; time away from home; hazards of employment; and lack of workmen's compensation. Of railroad employment in particular, it is stated that in spite of the progress that has been made "in the peaceful adjustment of labor disputes, there are still substandard wages, and there are working conditions in dire need of immediate correction." The airlines are found presenting "an instructive contrast," in the matter of wages paid to pilots and mechanics; but "the compensation of most unorganized airline workers does the airlines no credit."

Pipe Lines an Exception

On the other hand, employees of pipe lines are found to be doing well despite the fact that only a "small percentage" of them are covered by union contracts. "Workers in pipe line transportation," the report says, "enjoy many advantages over employees in other forms of transportation. Wages are traditionally higher, and since the petroleum code was established under the National Recovery Act, most pipe line workers have had a basic work week of 36 hours. Moreover, pipe line operations are not influenced by seasonal factors and workers experience relatively stable employment and annual income."

With respect to Railway Express Agency employees, the report says that they have "shared in the benefits won for labor in the railway industry despite the vigorous opposition of a management which has manifested great obstinacy in recent years." This is a complaint against the R.E.A. contention that its wage cases should be handled separately from those of the railroads. The fact that the Railroad Retirement and Railroad Unemployment Insurance acts do not cover freight forwarders is called a matter of "grave concern to transportation labor," although it is noted that two forwarders affiliated with railroads have been paying the pension and unemployment taxes "under protest."

The detailed comment on the annual-wage study recommendation indicates that it is not a call "for arbitrary action on the part of any transportation labor organization." On the contrary, it is put forth as something that "requires cooperation to the highest degree between labor and management." In repeating the recommendation as part of its railroad program, the report says that a guarantee of earnings is not unknown to that industry where it turns up "in the mileage and limited earnings guarantees which are common in train and engine service agreements." It adds that "a guarantee of pay for 90 per cent of the working days within the period of the contract was required of railroads which employed Mexican nationals during the war."

Railroad Prospects

Previously, the report had looked over railroad prospects in some detail, finding "unfavorable factors" in the prospective drop from war-time traffic levels; the return of intensified competition; the burden of carrying unneeded facilities; and the "handicap" of personnel practices "which have failed to keep pace with the times." In the latter connection, reference is made to reports of the Subcommittee on Labor and Personnel of the Railroad Committee for the Study of Transportation. Their publication indicates that the railroads "are becoming aware of the value of employee goodwill and are seeking ways of improving conditions in the industry," the report says, adding that "it might be noted parenthetically that these studies might present a more balanced picture if labor had been consulted in their preparation." Yet, "with all their weaknesses," they are "evidence that some attention is at last being given to a long-neglected subject."

"Favorable factors" in the railroad outlook are found in the improved financial condition of the carriers; the continuing advances in operating efficiency; and the public good will won by their war-time performance. "The railroads today," the report continues, "occupy a place in the public favor which they have not enjoyed for at least a generation and yet, even today, it is easy enough to find fault with railroad service, to complain of inadequate passenger accommodations and delays in the delivery of freight. The railroads' opportunity and task is to capitalize on their present popularity by eliminating the causes of complaint before the complaints rise to such volume as to cause the public to forget the splendid war record of the roads. The situation, if neglected, can easily develop into a race between the railroads' ability to improve and the public's ability to forget."

Hours and Wages

From railroad labor's standpoint, the report heads its list of "unfavorable factors" with the "outstanding and inescapable post-war problem" that will result from the "surplus of workers trained for railroad work and looking to the railroad industry for their livelihood." If traffic reverts to pre-war levels, R.L.E.A. calculates that the railroads will require 400,000 fewer employees than they now have; and, in addition, most of the 350,000 former railroaders in the armed services have reemployment rights. "These figures," as the report puts it, "add up to a pool of three-quarters of a million railroad workers who will be displaced if the railroad labor force reverts to its pre-war size."

Moreover, the number of hours worked by those who remain in service would be reduced with a corresponding reduction in pay, the report continues. It goes on to complain that this year's 18½-cents-per-hour wage increase included no allowance for that prospective reduction in take-home pay; nor did it take account of "disparities which existed in January, 1941, and which had plagued railroad employees for many years." The complaint proceeds to assert that the average compensation of railroad employees was 23 cents per hour below the average rates of employees in 25 industries listed in a U. S. Department of Labor report of April, 1945. "Only two industries on this list paid lower wages than the railroad industry" The "inequity" is called "even more glaring in the light of comparative figures concerning output per man-hour of industrial workers, including those employed on railroads."

The 18½-cent increase is identified as one which "was supposed to compensate railroad workers for the increase in the cost of living which had occurred since January, 1941." In the face of subsequent developments in the price field, the report finds it clear that the advance "will be inadequate" for even that pur-

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N. I. T. L. Attacks Freight Car Exports

Urges broadened car building program to supply needs of domestic railroads; takes no action on proposed credit plans for travel by train

CONDEMNATION of the export of freight cars and the raw materials from which such cars are made was expressed in a resolution unanimously adopted on November 22 by the National Industrial Traffic League during its annual convention, held this year at the Hotel Pennsylvania in New York.

The resolution, which earlier in the week had been approved by the league's executive committee, also urged a broadened freight car building program for domestic use and empowered W. H. Day, chairman of the league's committee on emergency transportation matters, to send letters to the presidents of all Class I railroads, the Association of American Railroads and Colonel J. Monroe Johnson, director of the Office of Defense Transportation, apprising them of the league's stand.

Mr. Day told the convention the carriers have between 50,000 and 60,000 freight cars on order, but, because of the steel shortage, he doubted that deliveries would be made at the anticipated rate of 7,000 a month. Even if the anticipated delivery rate could be met, he added, it would merely permit the railroads to offset the retirement of worn-out equipment. He said he understood that at least 30 per cent of the freight cars in use were badly in need of repairs.

Difficulties with L.C.L.

Among the factors Mr. Day mentioned as intensifying the present nationwide shortage of freight equipment was the five-day week. Many industrial and retail establishments, he explained, were unwilling to accept deliveries of merchandise on Saturdays and Mondays and, furthermore, would accept deliveries only during certain hours of the working days, thus causing a week-end immobilization of large numbers of freight cars.

The future, he continued, does not seem too bright. Many railroads in the recent past reduced their freight house facilities because of the mistaken notion that less-carload traffic was to disappear. On the contrary, Mr. Day said, l. c. l. traffic has grown and no one knows what volume it may eventually attain. Although the railroads are now anxious to enlarge their present freight houses and build new ones, the shortage of building materials is an effective block.

Colonel Johnson, who addressed the annual membership luncheon of the league on November 21, the first day of this year's two-day convention, said that with the railroads now moving 60,000 more freight cars a week than during the best weeks of the war, the tightness of car supply threatens to continue for months.

Despite the hampering of production by strikes and shortages of materials, he added, the demand for transportation is far above the war years. Meanwhile, the railroads have lost 50,000 cars since last year and replacements are being made at a monthly rate of 3,500, compared with 6,000 a month in the war period. Freight car production of 7,000 a month was promised in September, and that figure might be reached by next March, the O. D. T. director said, but, "unless a miracle happens, the country will have 50,000 less cars a year from now than it has today."

Traffic demand normally shrinks about 30 per cent in the winter months, Colonel Johnson said, which will enable the railroads to move some of the present backlog of freight, but it is up to shippers and railroad managements to devise methods to prevent a recurrence in 1947 of the present bad situation.

Increased demurrage charges, making it too expensive for shippers to use freight cars for storage purposes, were cited by Colonel Johnson as one of the measures which have helped the railroads to achieve the present big freight movement. The higher charges, he said, actually cost the nation's businesses less than lower charges would have.

The recommendation of the legislative committee that the league support any effort of the railroads to have the Crosser Act repealed was approved by the membership at the morning session on November 21.

A resolution calling upon Congress to curb the power of any organized selfish minority so that it could not "commit acts which would tend to paralyze the nation's arteries of commerce, to strangle its national economy, to substitute its prerogatives for those of constitutional and constituted government authorities, to usurp the power to tax which the people have delegated solely to local, state and federal governments, or to vitiate the constitutional rights of the citizenry at large" was approved during the same morning session.

The report of the special committee on Ex Parte 148, 162 and 163 said that the league should support a level of railroad freight rates and charges which will result in adequate transportation and avoid the possibilities of breakdown which, because of increased operating expenses, might be expected to follow serious deficits in transportation revenues. The evidence offered by the railroads applying for increases in freight charges, the report continued, established enormous increases in labor costs and other operating expenses, manifestly requiring more substantial increases in freight rates and passenger fares than provided for in the "so-called permanent rate structure as in effect prior to Ex Parte 148." The recommendation of the committee that general support be given the railroads in their fight for adequate rate increases was approved by the membership.

Wants New Pickup Ruling

The action of the Interstate Commerce Commission in exempting railroads from the responsibility for performing pickup and delivery service when prevented from doing so by labor disturbances was condemned by the league, which urged that the commission be requested to work out a less sweeping rule to govern railroad liability in the event that strikes prevent the pickup and delivery of l. c. l. freight.

Three suggested credit plans to facilitate the purchase of railroad tickets by business concerns and submitted to the passenger traffic committee by the Railroad Passenger Interterritorial Committee, representing the New England, Southern, Southwestern, Trans-Continental, Trunk Line and Western Passenger Associations, were described by the committee as not serving a useful purpose because of the amount of accounting which would be necessary to take advantage of them, and it recommended that the league take no action on the suggestions.

Legislation to fix the responsibility of airlines for the loss of property entrusted to their care was favored by the league in its adoption of a report from

the bill of lading committee. Formal complaint will be made to the Civil Aeronautics Board about the absence of any regulation fixing airline responsibility similar to the legislation enacted by Congress for land and water carriers. E. S. Gubernator, chairman of the committee, said the airlines had shown no interest in arranging to meet with shippers to discuss the matter of liability.

Mrs. Christine R. Taylor and James A. Dunnage, joint managing directors of Industrial Transportation Publications, Ltd., of England, were guests of the league and were introduced to the membership during the first day's business session by executive secretary E. F. Lacey. Mrs. Taylor, president of the Woman's Traffic Club of England, and Mr. Dunnage expressed the hope that the meeting would be the start of a series of world-wide congresses of traffic people.

Guests at the luncheon, in addition to Colonel Johnson, included executives of several of the nation's railroads, banks, insurance companies, private car lines, transportation associations and industrial concerns.

Alonzo Bennett, vice-president of the Federal Compress & Warehouse Co., Memphis, Tenn., who presided over the two-day convention, was re-elected president of the league. A. H. Schwietert, traffic director, Chicago Association of Commerce, was re-elected vice-president. R. W. Campbell, manager, traffic department, Butler Paper Corporation, Chicago, was re-elected league treasurer.

Rail Labor Announces Post-War Program

(*Continued from page 924*)

pose. It then proceeds to discuss the "unfavorable overtime standard which prevails in the railroad industry." The January, 1944, award of five cents per hour "in lieu of time-and-one-half after 40 hours," which settled the strike threat that brought on the brief period of War Department control, is called "only a stopgap provision."

Next comes the complaint about the slow procedures of the Railway Labor Act and the congested dockets of the National Mediation Board and National Railroad Adjustment Board. The report calls for cooperation between labor and management in the interest of expedition on these matters and says that N.M.B. must "streamline its activities." The number of emergency boards appointed in recent years is cited as an example of "the threatened disintegration of good labor relations on railroads."

"In contrast to the evidence of present failure to maintain the highest possible employees morale," the report notes such "favorable factors" as the "fine pioneering record of the railroads and their employees in their basic industrial relationship"; retirement and unemployment benefits enjoyed by railroaders; and the "assurance for the future of railroad labor in the certainty that whatever difficulties may be encountered, the railroads will, if alert and progressive in their management, continue to handle the bulk of the nation's domestic freight traffic."

"The rail labor organizations," the report adds, "have the same interest as railroad management in enlarging the share of the railroads in the nation's transportation volume. They also feel equal concern with the railroads in the general prosperity of the country, for upon this prosperity ultimately depends the amount of the nation's transportation traffic."

NEW BOOK . . .

Who's Who in Railroading in North America. 780 pages. 8¾ in. by 5¾ in. ***Bound in cloth. Published by the Simmons-Boardman Publishing Corporation, 30 Church street, New York 7. Price, $8.50.***

The familiar blue book of railroad personnel, the first issue of which appeared in 1885 as the "Biographical Directory of Railway Officials of America," now is available in its eleventh, or 1946, edition. The most recent previous edition was that of 1940, the regular schedule of revision having been interrupted by the war.

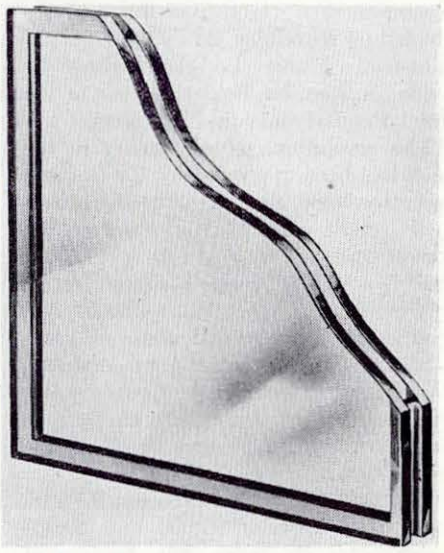
As has been the practice in recent years, the present edition includes biographical data not only of railroad officers, but also of labor leaders, executives in the railway supply field, specialists in transportation law, economics and finance, teachers concerned with railway problems, authors, editors, Interstate Commerce Commission practitioners, the higher Military Railway Service officers of World War II, and members of state and federal regulatory authorities.

The new "Who's Who" contains about 5,700 sketches, or some 400 more than the previous edition. Promotions and changes in positions occurring during the process of manufacture generally have been incorporated. Following the established pattern, the biographical sketches include personal information, that is, family data, social, political and religious connections, and military experience, as well as outlines of railroad or other business careers.

Thermopanes

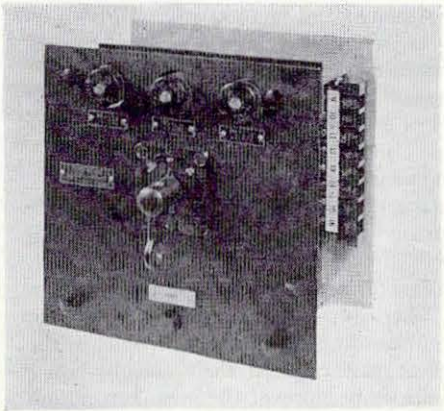
Thermopane units consist of two or more panes of glass separated by dehydrated air and hermetically sealed around the edges with a patented metal-to-glass bond. This bonding of metal to glass is known as the Bondermetic Seal, and it is what makes possible the special properties of the Thermopane.

This product of the Libby-Owens-Ford Glass Company, Toledo 3, Ohio, has good insulating qualities against heat or cold, thereby lessening the load on heating and air-conditioning systems. At the same time the low thermal conductivity allows more even temperature distribution for increased passenger comfort. The effects of changes in temperature or atmospheric pressure on the Thermopane are cushioned by the use of flexible metal between the panes of glass.

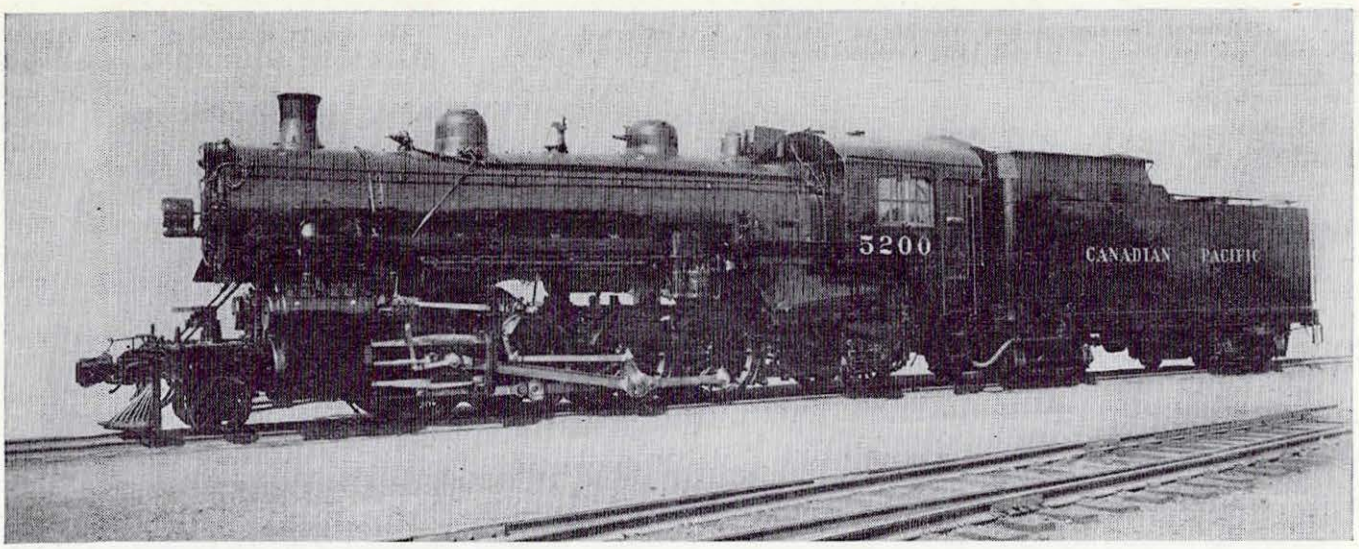


Thermopane units feature a sealed-in dry-air space to give clear visibility and high insulation values

Clearer vision is attained because the possibility of condensation on the glass is greatly reduced by the sealed-in dry air space. The entrance of dirt and moisture into the dry air space is guarded against by the bonding of the two panes into one unit. Hence there are only two surfaces to be kept clean.



This master control panel automatically sets the car air-conditioning system for heating, cooling, or ventilation as demanded by the weather, and regulates the night temperature 3 deg. warmer than the day setting for coaches, and 5 deg. cooler for sleepers. It is a product of Fulton Sylphon Co., Knoxville, Tenn.



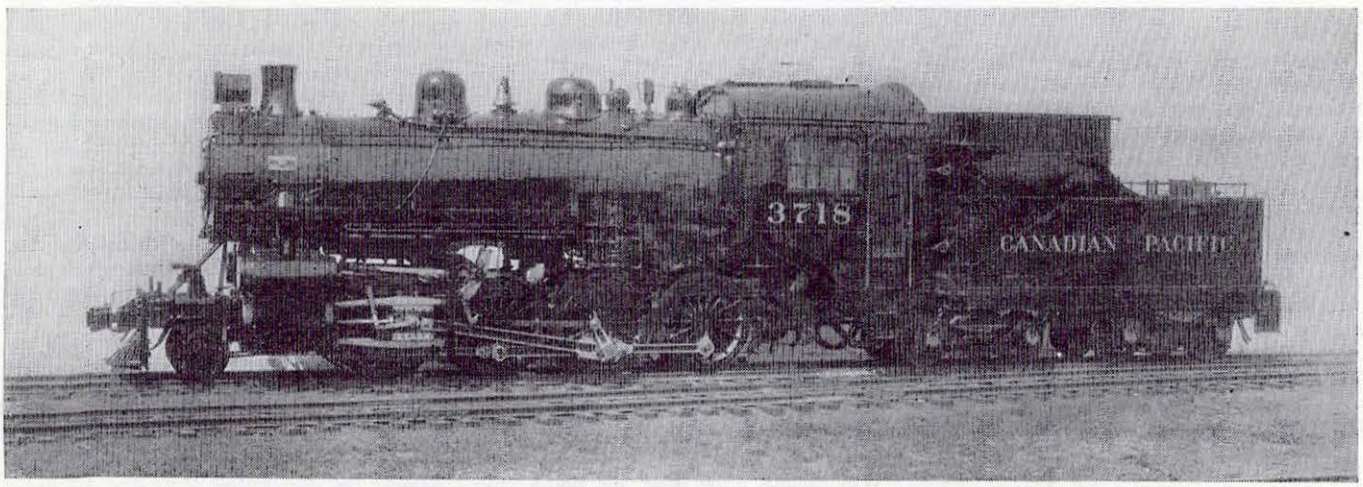
The small Mikado-type locomotive has a tender carrying 10,000 gallons of water and 18 tons of coal

Canadian Pacific Converted Locomotives

Rebuilding of non-stokered 2-8-0 type locomotives into 2-8-2's equipped with stokers results in a motive power unit having a tractive force of 45,000 lb.—New boiler and tender installed

A LOCOMOTIVE bearing the number 5200 was turned out of the Canadian Pacific's Angus shops, Montreal in October of this year, the first of 15 to be converted from the C. P. R. N2 Class of the 2-8-0 type to P1N Class locomotives of the 2-8-2 type. With a weight on drivers of 198,000 lb. and a tractive force of 45,000 lb., these locomotives have the characteristics to meet the C. P. R. requirements for relatively light motive-power units to haul a variety of low-tonnage trains in both main-line and branch-line service.

At one time the N2 class locomotives, built between 1909 and 1914, had the distinction of being the heaviest C. P. R. main-line freight locomotives. They were followed later by P1 class locomotives of the 2-8-2 type, the principal difference being that the latter class have a trailing truck and a larger boiler. Both classes of locomotives weighed enough to place them in the class of power to which stokers are now generally applied. Stokers could be satisfactorily applied to the P1 class locomotives, which had a trailing truck, but not to the N2 class. The P1 class were equipped with stokers and it was the intention to relegate the N2 class locomotives to switching service but during the war every type of locomotive had to be pressed into service and that condition still prevails so that it has not been found possible to place many



Before conversion the Mikado-type shown above was this 2-8-0 type with 5,000-gallon tender

General Dimensions and Weights of the C. P. R. Converted 2-8-2 Type Locomotives

Railroad	Canadian Pacific
Type of locomotive	2-8-2
Road class	P1N
Road numbers	5200-5214
Rated tractive force, 85 per cent, lb.	45,000
Weights in working order, lb.:	
On drivers	198,000
Total engine	271,500
Tender (fully loaded)	238,000
Wheel bases, ft.-in.:	
Driving	16-6
Engine, total	35-5
Engine and tender, total	72-8⅞
Driving wheels, diameter outside tires, in.	63
Cylinders, number, diameter and stroke, in.	2-22 x 32
Valve gear, type	Walschaerts
Boiler:	
Steam pressure, lb. per sq. in.	215
Firebox length, in.	103¼
Firebox width, in	69⅞
Arch tubes, number and length, in.	4- 3
Tubes, number and diameter, in.	24- 2 141- 2¼
Flues, number and diameter, in.	35- 5½
Length over tube sheets, ft.-in.	19-11½
Grate area, sq. ft.	50.1
Heating surfaces, sq. ft.:	
Firebox and arch tube	214.0
Tubes and flues	2,900.4
Evaporative, total	3,114.4
Superheater	832.0
Combined evap. and superheat.	3,946.4
Tender:	
Water capacity, imp. gal.	10,000
Fuel capacity, tons	18

of these locomotives in switching service as quickly as desired.

In the 1920's all of the N2 locomotives had been given new frames, cylinders, motion work and superheaters which furnished a good foundation on which to start in making a conversion. By adding a trailing truck and constructing a new boiler and a new tender, and at the same time applying a stoker, a locomotive was produced practically identical with the P1 class locomotive which has given a particularly good account of itself from a performance and availability point of view.

The wheelbase dimensions of the N2 locomotive were exactly the same as those of the P1 class from the leading truck to the rear driving wheel. Therefore, by cutting the main frames in back of the rear pedestal and adding suitable cross members to connect the trailing-truck frame the changeover to the new wheel arrangement was made with comparative ease.

In making the conversion some improvements were made over the existing P1 class. The principal changes are the increase in boiler pressure from 190 to 215 lb. per sq. in. which permitted a decrease in cylinder diameter from 23 to 22 in. and a resulting increase in tractive force from 43,400 lb. to 45,000 lb.

The weight on drivers was reduced from 216,500 to 198,000 lb., a decrease of 18,500 lb. Some of this weight was shifted from the driving wheels to the leading and trailing trucks as the decrease in total engine weight was 8,500 lb.

The boiler for the modernized locomotive has essentially the same dimensions as the boiler for the 2-8-0 locomotive except for its length of 19 ft. 11½ in. over tube sheets, an increase of 5 ft. 3¾ in. With the same number and sizes of flues and tubes the increase in length accounts for an increase of slightly over 1,000 sq. ft. in combined heating surface. The boiler has a 72⅛-in. outside diameter at the front tube sheet and a 79-in. diameter at the back end of the third course.

By the addition of the trailing wheels the total engine wheelbase has been increased from 25 ft. 5 in. to 35 ft. 5 in. Between the leading-truck wheel center and the front driving wheels the distance is 8 ft. 11 in.; between driving wheel centers, 5 ft. 6 in. The leading truck has 31-in. diameter wheels with 6-in. by 11-in. journals. The front, intermediate and rear driving wheels have 9½-in. by 14-in. plain journals; the main journals are 10 in. by 14 in.

The rectangular-type tender holds 10,000 Imperial gallons of water and 18 tons of coal. Both tender trucks are of the four-wheel type with 36¼-in. diameter wheels and 6½-in. by 12-in. journals.

The locomotive has a length over couplers of 84 feet 1⅜ in. It has a 16 ft. 6 in. rigid wheelbase and a total engine wheelbase of 35 ft. 5 in.

COMMUNICATION...

For Fact-Finders with Enforcement Power

STATEN ISLAND, N. Y.

TO THE EDITOR:

Your editorial in the October 12 issue captioned "The Labor Unions' Power of Monopoly" was splendid and in full keeping with my own views on the subject, but I must disagree that the racketeering by labor union leaders cannot be curbed by any means other than restrictive legislation by Congress. Every informed person knows or should know that the so called Wagner act has ceased to be the medium for settling industrial disputes and that "collective bargaining" has no meaning when considered in the light of governmental interference first started by the late President Roosevelt and subsequently adopted by his successor Mr. Truman.

Examine most recent strikes and you will find that they were caused, not by the employees, but as a result of opposition to awards of fact-finding boards or government agencies. How then are we to curb these strikes and get on with the production of the goods we so vitally need and demand? Simply by letting collective bargaining alone to run its own sensible course between management and labor: If unable to agree the issue to be then referred to a tribunal, composed only of public members, whose decision shall be final and binding on both parties.

Upon failure of management to abide, a penalty fine for each employee involved. Upon failure of labor unions to conform, employers to be given the right of summary dismissal of all strikers—hiring strikers back, if expedient, as new employees with the loss of all of their accumulated service and seniority.

Can you imagine either management or labor failing to accept a tribunal's award under such conditions? And, furthermore, such tribunal and penalties would not interfere with workers' right to strike, or otherwise infringe upon their personal liberties under the law.

Why cannot it be done and put a stop to all this nonsense which even rank and file members of labor unions do not want but which are forced on them by their leaders who must justify their existence by making constant turmoil, confusion and economic losses for all concerned?

E. B. ANDREWS.

[We did not say in our editorial that "restrictive" legislation was needed to curb labor union monopoly practices. What we said was that practically unrestricted monopoly power—which unions now enjoy under such statutes as the Wagner and Norris-La Guardia acts and the New Deal amendments to the Railway Labor Act—should be withdrawn. This would not require the enaction of new "restrictive" legislation, but simply the repeal of the statutes which have given the unions the power they are using so frequently and recklessly against the general welfare. As long as there is no risk involved in striking, however unjustified such action may be, and as long as employers are restricted in fighting strikes and in replacing strikers with new employees, the public can have no protection against the declaration of strikes for quite frivolous causes.—EDITOR.]

GENERAL NEWS

Railroads Once More Do the "Impossible"

Kendall calls box-car loading record an example of what teamwork accomplishes

Recent loadings of more than 400,000 box cars for two weeks in succession marked another accomplishment of the "impossible," Chairman Warren C. Kendall of the Car Service Division, Association of American Railroads, reported in his latest monthly review of the "National Transportation Situation." At the same time Mr. Kendall stressed the prevailing tight box-car situation with demand exceeding supply and shortages existing "everywhere."

The 400,000-car weeks were those ended October 28 and November 2, the average box-car loadings for the two-week period being 400,249 cars per week. This compares with an average of 379,493 cars for the corresponding period of 1945 and "exceeds any weekly box-car loading during the war period." The record, Mr. Kendall said, "is but one more example of what can be done by railroads and shippers working together toward taking up existing slack wherever it may be found." Moreover, the C. S. D. chairman found other accomplishments also worthy of mention.

He had reference to the lake-cargo coal movement which got off to a slow start this year because of the earlier miners' strike involving a tie-up of about two months. Nevertheless, this year's dumpings at Lake Erie ports, as of November 4, totaled about 44,250,000 tons as compared with 44,000,000 tons for the corresponding period of 1945. "Concentrated effort in this direction aided by coal distribution orders issued by the Solid Fuels Administration for War produced the results," Mr. Kendall said.

Faster Turn-around—Meanwhile he had pointed out that loadings as a whole continue well over 900,000 cars per week. "The railroads," the C. S. D. chairman went on, "are making every possible effort to increase the number of available cars needed for the continuing heavy volume of traffic. It is gratifying to record that the average turn-around time of all cars for October was 13 days, which compares with 13.47 days in September. As indicating that shippers and receivers are doing their part, the detention of cars by consignees over the free time of 48 hours in October was 15.82 per cent compared to 17.01 per cent in the previous month. This cooperative effort of carriers, shippers and receivers must continue if demands for equipment are to be met to a reasonable degree."

Mr. Kendall's review of the l.c.l. situation recorded a "favorable showing" which indicated to him that railroad recommendations for relaxation of the Office of Defense Transportation's minimum-loading order "were sound." The relaxations came recently in General Permits ODT 1, Revised-10, and Revised-11.

The first waives the order's 10-ton minimum loading requirements with respect to westbound and southbound l.c.l. cars from Official territory east of the Indiana-Illinois state line (not including any point within the Chicago switching district); under the second, eastbound l.c.l. cars may be forwarded from the same territory, but including the Chicago switching district, when consigned to any one destination with a minimum of 7½ tons per car. As noted in the *Railway Age* of November 2, page 742, O.D.T. Director J. Monroe Johnson has said that he was "extremely doubtful" about these relaxations when he went along on them for an "experimental period" of 60 days.

Less Congestion—"These relaxed provisions became effective October 21," Mr. Kendall said. "The day following, a canvass of the l.c.l. situation showed a total of 130 freight houses more than one day behind, holding 16,211 cars, including in the East and Southeast 83 points with 10,695 cars, and Chicago and West 47 points with 5,516 cars. Three weeks later, eastern and southeastern congested houses had been reduced to 64, holding 7,377 cars, western houses to 33, holding 4,591 cars, a total of 97 congested points holding 11,968 cars. This is a decrease of 33 per cent in the number of congested points and a reduction of 4,243 or 26 per cent in the number of cars held. . . .

"There was some apprehension that the relaxation . . . would result in a very substantial increase in the number of cars used in l.c.l. service. That this has not occurred is indicated by a comparison of the loadings before and after the revision became effective. For the weekly periods ended October 12 and 19, l.c.l. loadings averaged 130,300 cars. For the next two periods, ended October 26 and November 2, the average was 131,350 cars. The fact that there was only a nominal increase in the number of cars used indicates that the railroads have not

(*Continued on page 934*)

Beven Succeeds Bond as E. J. & E. Head

T. E. Bond, president of the Elgin, Joliet and Eastern, retires on November 30 after 38 years of continuous service with that road. He became president on May 1, 1941. Mr. Bond will be succeeded by T. D. Beven, vice-president of the company.

Passenger Service Hit by Mine Strike

Railroads meet O.D.T. requirements to save 25% on coal-burner mileage

Many curtailments in passenger train services have resulted as a result of strikes of the bituminous coal miners and the accompanying Office of Defense Transportation order No. 68, directing railroads to reduce coal-fired passenger train mileage by at least 25 per cent (*Railway Age*, November 23, page 893). In general, the disruption to passenger train service was less in the Southwest and West than in other regions because of the high proportion of Diesel and oil-burning steam locomotives in use in these territories. Indeed, on several southwestern roads coal-burning locomotives either are not in service at all, or are used only on scattered light-traffic branch lines.

A resume of the curtailments arising from the coal shortage and O.D.T. order follows:

Alton.—Local trains between St. Louis, Mo., and Springfield, Ill.; between Chicago and Bloomington, Ill.; and between Chicago and Joliet, Ill., have been discontinued, as has one from Springfield to Chicago on Sunday only. Five of this line's seven trains operated daily in each direction between Chicago and St. Louis are Diesel-powered, thereby minimizing the effects of the strike.

Atchison, Topeka & Santa Fe.—Virtually all Santa Fe passenger trains are normally handled either by oil-burning steam locomotives, Diesel power, or rail motor cars. The few coal-burning locomotives in passenger service have been withdrawn in favor of oil burners, with no curtailments in train service.

Chicago & Eastern Illinois.—Trains No. 21, 22, 23 and 24 between St. Louis and Chicago have been discontinued. Between Evansville, Ind., and Chicago, trains No. 96 and 97, the "Dixie Mail," have been consolidated with trains No. 90 and 94 and with No. 91 and 95, the passenger and mail-express sections of the "Dixie Flyer," respectively.

Chicago & North Western System.—The second sections of the "San Francisco Challenger" were discontinued between Chicago and Omaha, Neb., as were the "Viking," between Elroy, Wis., and Mankato, Minn., only; trains No. 107 and 160 between Chicago and Milwaukee, Wis.; and trains No. 121 and 224 between Menominee, Mich., and Escanaba. The "Mondamin" between Minneapolis, Minn., and Omaha; the "Viking," between Elroy and Minneapolis only; and the "Namekagon" between Hudson, Wis. (the connection with the "Viking" to

and from Minneapolis) and Ashland, were changed to run tri-weekly instead of daily. In addition, four trains serving Duluth, Minn., and two serving Green Bay, Wis., were discontinued one day a week and one train from Green Bay to Menominee was eliminated entirely. In the Chicago suburban zone, six daily-except-Sunday trains were discontinued on the north line along the shore of Lake Michigan. Six suburban trains northward and eight trains southward, daily on the line between Chicago and Madison, Wis., and four trains in each direction on the main line west were discontinued. In addition a number of other suburban trains were discontinued for parts of their runs or on Saturday or Sunday runs.

Oil-burning locomotives were substituted for coal-burners on the "Los Angeles Limited" between Chicago and Omaha, and on No. 503, 504, 515 and 514 between Mankato and Huron, S. D. Rail motor cars were substituted for coal-fired steam locomotive passenger trains between Iron River, Mich., and Escanaba.

Chicago, Burlington & Quincy.—Trains No. 51 and 52 between St. Louis and Savanna, Ill.; No. 27 and 28 between Ottumwa, Iowa, and Des Moines; No. 3 and 4 between Galesburg, Ill., and Burlington, Iowa, only; No. 14 and 15 between Table Rock, Neb., and McCook; and No. 7 and 10 between Galesburg and Quincy, Ill., have been discontinued. The "Ak-Sar-Ben" and the "Fast Mail" have been consolidated from Omaha to Lincoln, Neb., as have the "Adventureland" and the "Ak-Sar-Ben Zephyr" in the opposite direction. Substitution of oil-burners for coal-fired locomotives has been made effective on trains No. 22 and 23 between Kansas City, Mo., and Omaha, while rail motor cars have replaced steam trains powered by coal-burning locomotives on No. 9-179 and 178 between Des Moines and Burlington and on No. 32 and 33 between Aurora, Ill., and Mendota. Diesel locomotives now handle No. 3 and 4 between Chicago and Galesburg, No. 45 and 52 between Chicago and Savanna, and No. 9-178 from Galesburg to Burlington. In the coal fields served by the Burlington, 15 yard engine assignments have been discontinued.

Chicago Great Western.—Trains No. 22-31 and 32-27 between Omaha and Minneapolis have been discontinued.

Chicago, Indianapolis & Louisville.—This road has discontinued the "Tippecanoe" between Chicago and Indianapolis, Ind.

Chicago, Milwaukee, St. Paul & Pacific.—Trains No. 29, 51, 12 and 8 between Milwaukee and Chicago; No. 3, the "Marquette," from Chicago to Mason City, Ia.; No. 18, the "Marquette" from Mason City to Madison, Wis., only; No. 20 from Madison to Chicago; No. 210-21 and 36-361 between Milwaukee and Freeport, Ill.; No. 35, 37, 30, and 8 between Berlin, Wis., and Milwaukee; No. 210-27 and 20-361 between Milwaukee and Beloit, Wis., and No. 118 and 121 between Minneapolis and Calmar, Ia., have all been discontinued. The Milwaukee made no changes in its Chicago suburban service. Diesel or oil-burning steam locomotives have been substituted for coal-fired steam locomotives on No. 15 and 16 between Minneapolis and Miles City, Mont.; No. 115 and 116 between Harlowton, Mont., and Great Falls; and No. 25 and 26 between Milwaukee and Kansas City.

The Milwaukee has placed an additional 4,000-hp. Diesel locomotive in the Chicago-Twin Cities locomotive pool, thereby securing a reduction of 561 coal-fired steam locomotive miles in this territory daily. The substitution of gas-electric rail motor cars for steam trains between Madrid, Ia., and Des Moines, and between Spirit Lake, Ia., and Des Moines, is producing an additional saving of 220 coal-burning locomotive miles daily.

Chicago, Rock Island & Pacific.—The operation of trains No. 11 and 12 between Chicago and Rock Island, Ill.; No. 9 and 22 between Omaha and Des Moines; No. 19 and 212 between Bureau, Ill., and Rock Island only; and No. 217 and 216 between Rock Island and Allerton, Ia., has been discontinued. Bus connections between Bureau and Peoria, Ill., have been altered to meet No. 39, the "Imperial" instead of No. 11 as before, and additional stops have been added to No. 39's schedule. Added stops have been scheduled for some of the remaining passenger trains between Chicago and Bureau and between Des Moines and Omaha. In the Chicago suburban zone seven daily passenger trains in each direction, as well as a number of Saturday and Sunday only trains, are not now being operated. The Rock Island, because of its large fleet of Diesel and oil-burning steam locomotives, is considerably less affected by the order than many other roads.

Great Northern.—This road operates virtually all of its passenger trains either with Diesel power or with oil-burning steam locomotives. Electric power is used in the Cascade mountains. No passenger trains have been discontinued.

Illinois Central—This railroad has discontinued 17 passenger trains running 3,730 train miles daily, which is 25.2 per cent of the road's coal-burning passenger train mileage. The following trains have been withdrawn: No. 31 from Chicago to Champaign and No. 29 from Champaign to Carbondale, Ill., and No. 30 from Carbondale to Chicago; No. 27 and 28, the "Sinnissippi," between Chicago and Freeport, Ill.; No. 15 and 16, the "Iowan," between Ft. Dodge, Iowa, and Sioux City only; No. 205 and 226 between St. Louis and Carbondale; No. 103 and 104, the "Irvin S. Cobb," between Louisville and Fulton, Ky.; No. 23 and 28, local trains between Memphis and Greenville, Miss.; No. 203 and 204 between Shreveport, La., and Meridian, Miss.; and No. 32 and 33 between New Orleans and Baton Rouge, La.

Diesels Aid—*Kansas City Southern.*—All passenger trains on the K. C. S. are operated either by oil-burning or Diesel locomotives. There has been no reduction in service. The Southern division of the road is operated entirely by these classes of locomotives also and is, therefore, not affected. The Northern division, from De Queen, Ark., to Kansas City, is operated with steam locomotives, of which about 50 per cent are oil-burners, including locomotives in helper and local service. On November 23, the K. C. S. had approximately 35 days' coal supply on hand. It expects that, should this prove insufficient to outlast the strike, it will be able to redistribute its oil-burners so as to continue operation without any "serious curtailment" in freight service. Delivery of an 8,000-hp. road freight locomotive about December 5 is expected to assist materially.

Louisiana & Arkansas.—This road uses Diesels and oil-burning steam locomotives exclusively. No curtailment of service is anticipated.

Louisville & Nashville.—The following trains have been discontinued: No. 33, the coach section, and No. 36, the west coast section of the "Southland," between Cincinnati and Atlanta, Ga., have been consolidated with No. 35 and 32, other sections of the "Southland" No. 101 and 104, local trains between Cincinnati and Louisville, Ky.; No. 103 and 102, local trains between Paris, Tenn., and Memphis only; No. 53 and 94 between Evansville, Ind., and Nashville, Tenn., only (present equipment of these trains will be handled in No. 95 and 54, which run a few hours behind); No. 153 and 154, local trains between Evansville and Louisville; No. 31 and 34, local trains between Cincinnati and Corbin, Ky.; Eastern Kentucky division trains No. 3 and 4 between Lexington, Ky., and Fleming; No. 23 and 24 between Corbin and Harland; Pensacola division trains No. 1 and 4 between Flomaton, Ala., and Pensacola, Fla.; No. 9 and 12, local trains between Ocean Springs, Miss., and New Orleans, La.; No. 85 and 86 between Anniston, Ala., and Calera only; No. 1 and 4 between Selma, Ala., and Flomaton; and No. 27 and 28 between Georgiana, Ala., and Graceville, Fla., have been discontinued.

Minneapolis & St. Louis.—Sixty per cent of this road's aggregate freight train operations are powered with Diesel-electric locomotives, and all of its passenger trains are handled by gas-electric rail-motor cars. There have been no curtailments of train or yard service.

Minneapolis, St. Paul & Sault Ste. Marie.—Trains No. 105 and 106, between Minneapolis and Enderlin, N. D.; No. 107 and 108 between Enderlin and Minot, N. D.; and No. 86 and 87 between Gladstone, Mich., and Sault Ste. Marie, have been discontinued. Trains No. 64 and 65 between Thief River Falls, Minn., and Duluth, and No. 257-258 and 259-260, between Drake, N. D., and Bismarck have been reduced from a daily except Sunday basis to tri-weekly.

Missouri-Kansas-Texas.—This road uses oil-burning steam and Diesel locomotives exclusively. No reduction in service has been made.

Missouri Pacific.—No passenger trains have been discontinued. This road uses both coal-fired and oil-fired steam locomotives as well as Diesels, and has been able to reassign its motive power so as to avoid discontinuing any passenger trains. Normally, coal-burning engines are in both freight and passenger service between Little Rock, Ark., and St. Louis, but oil-burners and Diesels have now been assigned to all through train service in this territory.

Nashville, Chattanooga & St. Louis.—The mail and express section of the "Dixie Flyer" between Nashville and Atlanta, and local trains No. 3-103 and 4-104 between Nashville and Paducah, Ky., and Hickman, have been discontinued.

Northern Pacific.—The only passenger train on this line, the operation of which has been affected by the coal strike, is the "North Coast Limited" operating in both directions between St. Paul, Minn., and

Seattle, Wash. Formerly operated in two sections daily, it is now being operated in only one section.

Pere Marquette.—Trains No. 3 and 6, between Chicago and Grand Rapids, Mich., and No. 103 and 104 between Detroit and Bay City, Mich., have been discontinued. Trains No. 101 and 106, which normally run daily except Sunday between Grand Rapids and Petosky, Mich., have been placed on a tri-weekly schedule.

St. Louis-San Francisco.—All passenger trains on the Frisco are handled by oil-burning steam locomotives. There has been no curtailment of passenger service.

St. Louis Southwestern.—Except on a few branch-line mixed-train runs in southeast Missouri and northeast Arkansas, and a limited number of switch engines, all train service on the Cotton Belt is performed either by oil-burning steam locomotives or by Diesels. There have been no curtailments of train service.

Southern Pacific.—The Pacific lines of the S. P. are operated almost exclusively by oil-burning locomotives. A large fleet of Diesel switchers is also in use. The Texas & New Orleans lines of the S. P. are completely oil-burning. There have been no service curtailments reported.

Texas & Pacific.—This line uses oil fuel exclusively for all train operations. There have been no reductions in service.

Wabash.—The "Bluebird" between St. Louis and Chicago; No. 23 and 22, local trains between St. Louis and Moberly, Mo.; the "Night Express" operated jointly with the Pennsylvania between Chicago and Detroit; and local trains No. 12 and 13 between Orland Park, Ill., and Decatur only, have been discontinued. St. Louis-Kansas City train No. 3 has been advanced to leave St. Louis at 8 a.m., instead of 9:20, and makes No. 23's stops to Moberly. The Detroit-St. Petersburg, Fla., sleeping car normally handled on No. 201 from Detroit is now assigned to No. 3, leaving at 8 p.m., 4 hr. earlier than normally.

Western Pacific.—Of this line's 205 locomotives 188 are either oil-burning steam type or Diesels. Train service has not been interrupted.

In the East and South—The effect of the O. D. T. order on railroads in the East and South varied, of course, with the extent to which steam locomotives are used in passenger service. In the New York and Philadelphia suburban areas no curtailment of commutation service was required on the electrified lines of the New York, New Haven & Hartford, Long Island, Pennsylvania, Delaware, Lackawanna & Western, and Reading. The electrified main lines of the New Haven between New York and New Haven, Conn., and of the Pennsylvania from New York to Washington, D. C., and Harrisburg, Pa., likewise were unaffected. On other lines the extent of the curtailment of service depended to a considerable extent on the availability of Diesel-electric locomotives for assignment in place of steam power.

Norfolk & Western.—This road discontinued 13 passenger trains, including the streamlined "Powhatan Arrow" between Norfolk, Va., and Cincinnati, Ohio.

New York, New Haven & Hartford.—Howard S. Palmer, president and trustee, said that the New Haven would not discontinue any of its regular passenger trains as a result of the O. D. T. order. Its 25 per cent reduction in the use of steam power was accomplished by the reassignment of Diesels already in passenger service. Where two 2,000-hp. Diesels have been paired to make a 4,000-hp. engine to haul some trains, the units have been separated and assigned to separate trains. This was expected to result in minor delays to some of the heavier trains, it was explained, because of inability to maintain fast schedules with half the regular horsepower, but it has made it possible for the road to operate 100 per cent of its passenger service.

Long Island.—On its steam-operated lines this road withdrew 31 weekday and 30 Sunday trains, those affected being non-commuter trains as far as possible.

Central of New Jersey.—This road announced the temporary discontinuance of 98 weekday and 71 week-end trains.

Erie.—Through passenger trains between Jersey City, N. J., and Chicago were not affected, as the required curtailment was obtained by withdrawing trains handling baggage and express. In the New York suburban area some 83 trains were suspended or put on revised schedules, most of them being in mid-day or late-evening service.

Reading.—This road suspended two trains in each direction between Jersey City and Philadelphia and made comparable reductions on other steam-operated lines. Altogether about 27 week-day trains were affected.

Baltimore & Ohio.—Many of this road's main-line trains are Diesel-powered. Some curtailments were effected between Philadelphia and Washington, in the Pittsburgh territory, and between Cincinnati and Toledo.

Lehigh Valley.—An overnight train in each direction between New York and Buffalo was suspended, and the "Asa Packer's" run was shortened.

Seaboard Air Line.—While a substantial part of this road's main-line passenger service is Diesel-powered, its "Robert E. Lee" was suspended between Atlanta, Ga., and Birmingham, Ala., and certain mail and express sections of other trains have been consolidated with passenger sections.

New York Central.—A cut of about 27,000 passenger-miles daily achieved by taking off 165 passenger trains, was this road's response to the O. D. T. order. Among the principal trains affected are the "Advance Commodore Vanderbilts" between New York and Chicago, combined with the "Pacemakers"; the "Iroquois," Chicago to New York; the "New England States," combined with the "Paul Revere," between Boston and Chicago; the "Southwestern Limited," held to one section between New York and St. Louis; the "Wolverine," held to one section between New York and Boston and Chicago; the "Advance Knickerbocker," discontinued, Albany to Buffalo; the "Genesee," combined with Train 159 and the "Western Express," New York to Buffalo.

Train No. 136 was discontinued, Utica to New York, and No. 2, 3 and 11 between Utica and Malone. No. 54 was discontinued, Albany to New York. No. 42 and 52 were combined, Buffalo to Albany; and No. 158 was discontinued, Buffalo to Rochester. No. 57 was combined with No. 21, Buffalo to Cleveland. The "Empire State Express" was combined with No. 83, Buffalo to Cleveland. No. 151 was discontinued, Buffalo to Cleveland, as were No. 374 and 379, between Buffalo and Hamilton.

In the Cleveland district, No. 9 was discontinued, Cleveland to Chicago, and the "Empire State Express" was discontinued between Cleveland and Toledo. No. 272 and 218 were combined, Cleveland to Buffalo, and No. 244 was discontinued between those points. Between Cleveland and Cincinnati, No. 433, 424, 447 and 448 were discontinued.

At Chicago, the "Prairie State" was discontinued, Chicago to Cleveland; No. 608, Chicago to Elkhart; and No. 308, the "Advance Wolverine," Chicago to Detroit. No. 342 was discontinued, Chicago to Detroit, and No. 358 and 364 were combined, Chicago to Jackson. The "Queen City Special" and the "Cincinnati Night Express" were discontinued, Chicago to Cincinnati.

No. 345 was discontinued, Detroit to Chicago; No. 324, Detroit to Buffalo; No. 222 and 307, Detroit to Toledo, and No. 202 and 207, between Detroit and Mackinaw City. No. 7 and 8 were discontinued between Columbus and Toledo, and No. 4 and 9 between Columbus and Charleston, W. Va. No. 304 and 307 were discontinued between Indianapolis and Toledo and No. 13 and 14 between Indianapolis and Peoria.

In the New York commuting zone 41 New York Central trains were suspended, including 20 on the West Shore, and in the Boston suburban district the Boston & Albany withdrew 26 local trains. Six trains between Pittsburgh and Youngstown, Ohio, were taken off by the Pittsburgh & Lake Erie.

Southern.—This road's Diesel-powered trains were not affected by the order, but the necessary reduction in steam-powered service amounted to 7,290 train-miles daily, accomplished by discontinuing 34 trains. Most of these trains were on relatively short runs, but the "Royal Palm" between Jacksonville, Fla., and Cincinnati, one train each way between Atlanta and Washington, D. C., and one each way between Birmingham and New Orleans, were among those withdrawn.

Pennsylvania.—By rearrangement of sleeping car assignments, reduction in the number of mail and express trains, curtailment of branch line and other short-run service, and elimination of double-heading, this road substantially cut its coal-powered engine mileage. In the East other adjustments in service for the emergency included the withdrawal of the "Sailor" from Cape Charles, Va., to New York, of the "Steel King" in each direction between Pittsburgh and New York, and of the "Metropolitan" from New York to the West. Appropriate reductions were made in the operations of the Pennsylvania-Reading Seashore Lines. The Cincinnati-Chicago "Night Expresses" and the "Mid-City Express," Chicago to Detroit (via Fort Wayne, Ind., and the Wabash) have been discontinued.

N. R. A. A. Plans 1947 Exhibit

At a recent meeting of the board of directors of the National Railway Appliances Association, preliminary plans were made for the 32nd annual exhibition of the association, to be held in the Coliseum, Chicago,

March 17-20, 1947, in conjunction with the annual meeting of the American Railway Engineering Association. Floor plans, space contracts and other printed data will be mailed to members the first week in December, but other companies interested in exhibit space are asked to contact the secretary of the Association, C. H. White, 208 South LaSalle Street, Chicago, 4.

Freight Car Loadings

Figures for freight car loadings for the week ended November 30 were not available when this issue went to press.

Loading of revenue freight for the week ended November 16 totaled 917,124 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, November 16			
District	1946	1945	1944
Eastern	175,702	151,395	161,490
Allegheny	193,969	171,877	189,304
Pocahontas	66,342	56,831	55,228
Southern	140,999	125,761	129,970
Northwestern ..	135,050	103,065	107,975
Central Western	138,524	127,615	141,199
Southwestern ..	66,538	64,030	78,826
Total Western Districts	340,112	294,710	328,000
Total All Roads	917,124	800,534	863,992
Commodities:			
Grain and grain products	48,910	55,889	52,035
Livestock	26,732	25,011	24,317
Coal	191,114	172,053	174,816
Coke	14,515	12,832	14,143
Forest products	47,518	31,448	41,452
Ore	59,650	32,787	40,023
Merchandise l.c.l.	131,051	115,924	108,969
Miscellaneous ..	397,634	354,590	408,235
November 16 ..	917,124	800,534	863,992
November 9 ..	913,345	838,218	839,504
November 2 ..	922,312	851,962	893,069
October 26 ..	942,257	894,779	916,485
October 19 ..	931,766	773,087	906,005
Cumulative total, 46 weeks	36,851,692	37,655,998	38,940,875

In Canada.—Car loadings for the week ended November 16 totaled 79,772 cars as compared with 84,698 cars for the previous week and 74,092 cars for the corresponding week last year according to the compilation of the Dominion Bureau of Statistics.

Totals for Canada:	Revenue Cars Loaded	Total Cars Rec'd from Connections
November 16, 1946	79,772	36,584
November 17, 1945	74,092	32,635
Cumulative totals for Canada:		
November 16, 1946	3,250,299	1,585,138
November 17, 1945	3,218,894	1,611,468

Western Railway Club Hears Kettering

Both instruction and entertainment were supplied in full measure to about 1,300 members and guests of the Western Railway Club following the dinner at their regular monthly meeting at Chicago on November 25, when C. F. Kettering, vice-president and director of research of the General Motors Corporation, discussed the general subject of internal combustion engines.

Following an introduction by C. R. Osborn, who is also a General Motors vice-president and general manager of the Electro-Motive division, Mr. Kettering outlined briefly the development of internal combustion engines from the Polynesian fire pistons, which gave Rudolph Diesel his original idea, to the latest types of engines which are such an important factor in railway and industrial progress and modern high standards of living. He described in layman's language the differences and yet the fundamental similarity between gasoline and Diesel engines; showed how closely improvements in each type are tied up with advances in the technology of petroleum fuel preparation; explained the effect of varying compression ratios; and outlined the methods used in overcoming detonation difficulties.

Regarding gas turbines, Mr. Kettering said they are an important development, but just how far and how fast this development will go is at present uncertain.

In closing his remarks, Mr. Kettering paid tribute to the railroads as furnishing "the only reliable all-year-around transportation in the world, although some other media may be faster, if you pick the right day." He said that railroads are, and will remain, the backbone of freight transportation; and that competition in designing and building improved types of motive power for both passenger and freight service is helpful to all concerned.

New R. B. A. Board Members

At the annual meeting in New York of the Railway Business Association, held on November 21, two vacancies on the governing board were filled by the election of Cleve H. Pomeroy, president of the National Malleable & Steel Castings Company, Cleveland, Ohio, and W. T. Kilborn, president of the Flannery Bolt Company, Bridgeville, Pa.

Fairbanks, Morse to Expand Beloit Locomotive Plant

The building capacity of the Beloit (Wis.) works of Fairbanks, Morse & Co. will be increased soon by the erection of a new one-story building for construction of Diesel-electric locomotives ranging in size from 1,000-hp. switchers to 8,000-hp. road units, C. H. Morse, III, vice-president in charge of manufacturing, has announced.

The new plant will be 163 ft. wide by 703 ft. long and 54 ft. high to accommodate locomotive assembly machinery, including electric traveling cranes. Mr. Morse said that the proposed building, approved by the Civilian Production Administration, has been designed in structure so that the heavy industrial types of materials may be used. This, he said, would eliminate the need for materials which might conflict with the Veterans' Emergency Housing Program.

Shippers Board Meeting

The Central Western Shippers Advisory Board will hold its 54th regular meeting on December 12-13 at the Hotel Martin, Sioux City, Iowa, in cooperation with the Sioux City Chamber of Commerce and the traffic club of that city. Guest speaker will be A. H. Schwietert, general chairman, Mid-West Shippers Advisory Board, and director of traffic, Chicago Association of Commerce.

Pullman-Standard's Backlog of Orders Hits $229 Million

The unfilled order backlog of the Pullman Standard Car Manufacturing Company stood at $229 million as of October 1, the company has reported. This figure exceeds that for any other peace-time period in the firm's history, the company said. It was stated, however, that prospects for increased production are brighter, with the supply of materials the limiting factor for the next several months.

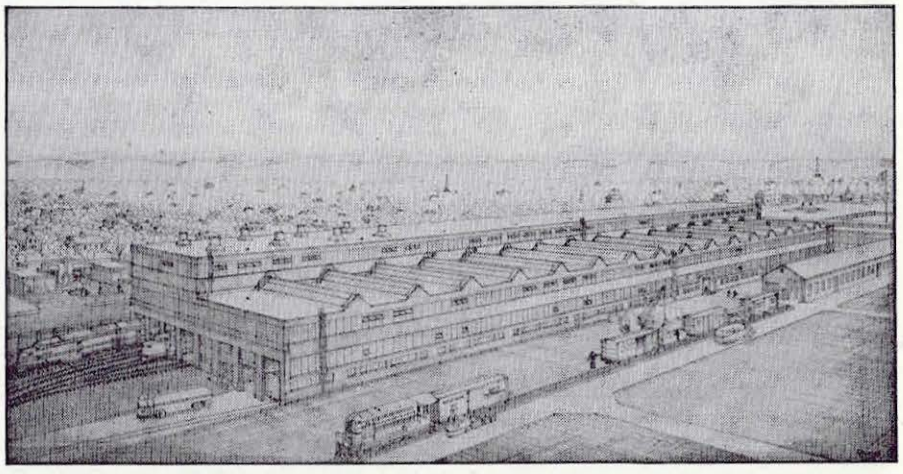
Mexican Embargo Modified

A November 19 revision of Car Service Division Embargo No. 400, which restricts the movement of carload freight for export to Mexico, was explained in a circular issued last week by C. S. D. Chairman Warren C. Kendall. The new provisions are as follows:

1. Carload freight intended for export via the National of Mexico may henceforth be accepted only when a permit, issued by H. J. Arnett, or a photostatic copy of the permit, is in the possession of the railroad agent at the point of origin.

2. The embargo has been lifted as to shipments consigned to Texas border points for export by truck.

3. The embargo no longer requires a "not



The proposed Diesel locomotive plant of Fairbanks, Morse & Co., at Beloit, Wis., will be equipped for construction of engines ranging in size from 1,000-hp. switchers to 8,000-hp. road locomotives. The building will be 163 ft. wide, 703 ft. long and 54 ft. high.

for export" notation on billing covering domestic freight consigned to border points.

4. Tank cars moving empty on revenue billing are no longer exempt, but require permits to the same extent as other cars of private ownership.

With respect to the removal of the restrictions against freight intended for export to Mexico by truck, Mr. Kendall said that shippers should be cautioned against forwarding such freight before arrangements for transshipment have been perfected. "Arrival of freight at border points in excess of broker's ability to handle will necessitate immediate reinstatement of embargo against traffic for export by highway," he added.

Pullman-Standard Wins Lawsuit Against Electrical Union

Judgment against a local of the International Brotherhood of Electrical Workers has been awarded in United States district court at Birmingham, Ala., to the Pullman-Standard Car Manufacturing Company, which had sued the union for calling a walkout of 13 journeymen electricians at its Bessemer (Ala.) freight car plant in October, 1945, thereby breaking a no-strike agreement.

The union admitted liability for breaching its no-strike agreement, which the plaintiff contended resulted in loss of more than 100,000 man-hours of employment. The plant was closed from October 29 to December 17, the company reported.

All striking members of the local were discharged as a result of the walkout, and the union is no longer the bargaining agent for electrical workers in the plant, the company said. In view of these facts, and because the union acknowledged its responsibility for the breach of contract, the company agreed to settle the $250,000 suit by a $1 judgment and payment of all court costs by the union.

Fletcher Denies Rates on War Freight Were Unreasonable

R. V. Fletcher, acting president of the Association of American Railroads, denied in a November 25 statement that railroad freight rates on the government's wartime shipments were unreasonable or in any other respect unlawful. Judge Fletcher was commenting on Attorney General Tom C. Clark's recent announcement that the Department of Justice would launch proceedings before "appropriate tribunals" to effect recovery in cases where it considered that the rates on war materials had been "unreasonable."

The Clark announcement, noted in the *Railway Age* of October 5, page 578, came after the attorney general had rendered an opinion to the effect that the Interstate Commerce Commission may entertain complaints of the government and award reparations with respect to rates which the government itself negotiates with the carriers under section 22 of the Interstate Commerce Act. This opinion was embodied in a letter to former Director Harold D. Smith of the Bureau of the Budget, who had requested it following an investigation his bureau had made at the request of Chairman Wheeler of Senate committee on interstate commerce into transportation charges paid by the War Department. The report on that investigation was noted in the *Railway Age* of February 9, page 333.

After referring to the attorney general's announcement of his plans to seek reparations, Judge Fletcher's statement went on to say:

"The railroads have not been advised of the rates which might be considered excessive, and are not in position to discuss them in detail. Until such time as details are available, it should be borne in mind that during the war to railroads handled for the government millions of shipments consisting of thousands of different commodities, many of which had never before moved in commerce. These shipments were handled under lawful rates, duly filed with the Interstate Commerce Commission and published, except in those numerous instances in which the railroads voluntarily put into effect for the government rates which were lower than the reasonable rates prescribed for ordinary traffic.

"It has not been claimed by any of the interested parties that the rail charges in general could be considered unreasonable or in any other respect unlawful. The differences that did arise between the government as a shipper and the railroads as to the reasonableness of rates were infinitesimal in number and amount involved, when compared with the total traffic transported. The Interstate Commerce Commission exists as the government agency for the determination of such differences."

Chinn, Mottier Given New Positions in A.R.E.A.

Armstrong Chinn, chief executive officer of the Alton, has been advanced from junior vice-president of the American Railway Engineering Association to senior vice-president. He automatically succeeded C. J. Geyer, general manager of the Chesapeake & Ohio, who resigned. Mr. Chinn is succeeded as junior vice-president by C. H. Mottier, a member of the association's board of directors and vice-president and chief engineer of the Illinois Central. Mr. Mottier was elected to his new position at a meeting of the association's board at Chicago on November 19.

Lea Committee Gets Views of I. C. C. Practitioners

The Association of Interstate Commerce Commission Practitioners recently submitted to the House committee on interstate and foreign commerce its response to the "questionnaire" which the committee distributed more than a year ago in connection with its "national transportation inquiry." The response, prepared by a special committee of the association, noted the diversity of the members' views on some of the subjects listed in the questionnaire, and thus took advantage of the House committee's assurance that "no one need discuss all these subjects."

Dealing first with the national transportation policy, the practitioners found it "generally sound and adequate." At the same time they suggested that the policy's call for coordination between various agencies of transportation implied that the I. C. C. should act as "coordinator." The commission, the report went on, "should, in our opinion, staff itself accordingly to undertake more actively as the years go on, its duty as coordinator. In carrying out this duty . . . it is understood that the commission must at all times abide by the requirement of the National Transportation Policy to preserve the inherent advantages of each individual mode of transportation."

For Compensatory Rates—With respect to ownership and operation of the carriers, the report said that the "overwhelming majority" of the association's members favors private ownership and operation and believes that rates "should be such as should compensate the carriers, not merely in niggardly fashion, but fairly, for the services which they perform, and to such an extent as will assure their financial credit and thus enable them to contiue satisfactory service to whatever extent required in the future."

The report also said of the policy declaration that it should be complete in itself, and thus consideration should be given to the elimination of "various declarations of policy scattered through the Interstate Commerce Act and elsewhere." In this connection the report mentioned sections 15(a)(2), 216(i), 307(f), and 406(d), which embody the rules of rate making, in turn, for railroads, motor carriers, water carriers, and forwarders; also, the Hoch-Smith Resolution.

With respect to regulation, the report said that the association's membership "quite generally, but not unanimously," favors regulation through the medium of one regulating body, and believes that that body should be the I. C. C. At the same time, there exists in the association the view that "if any one agency of commerce would prefer separate regulation by some other administrative body, it should not be precluded by statute from the enjoyment of that preference."

Against Promotional Regulation — Meanwhile there is "general recognition" in the membership that "evil is the likely result of any combination of regulation and promotion and of competition between regulated and non-regulated facilities of interstate commerce." And the membership also believes generally that regulated carriers should not be subject to the anti-trust laws; but their exemption should be set up in a way to avoid "coercion as between carriers in their relationships with respect to rates and otherwise." Further comment on regulation complains of the I. C. C.'s slow procedures, saying that nothing would so enhance the commission's position as a speed-up

"This," the report explained, "is not to infer that the commission should abandon or limit its careful consideration of issues which come before it for determination, but it should eliminate all unnecessary delay in reaching its conclusions. In this latter connection we believe that the commission is at times embarrassed by the activity of other government agencies and departments who come before it in the capacity of intervenors, but really representing special interests. The commission's prestige as a regulatory body should be maintained and should be recognized by all parties interested, including other government agencies and departments. To whatever extent government agencies and departments appear

before the commission in formal proceedings, they should be required, as are all other intervenors, to state their position, definitely, in accordance with the commission's Rules of Practice."

As to finance, the report suggested that, except as respects purely sub-marginal carriers, there should be no carrier credit problems if the national transportation policy is observed. It went on to note delays encountered in section 77 reorganization proceedings, and indicated a preference for voluntary readjustments of capital structures as permitted by the former McLaughlin Act. The report made no comment on ownership of one form of transportation by another, its only expression on integration being one of satisfaction with the progress of consolidations in the railroad and motor carrier fields under existing law.

Not Agreed—On the matter of taxation, "no member of the association would disagree with the proposition that all facilities of interstate commerce should be fairly treated . . . and that there should be no unjust discrimination as between the various facilities." So far as translating this generalization into specific recommendations is concerned, however, the committee "believes that the entire subject is too technical and too complicated, is too foreign to the activities of the great majority of the association's membership, and too highly controversial to permit any unanimous expression of views on behalf of this association beyond what is said above."

Federal aid to transportation and interstate "barriers" to commerce were found to be subjects "so highly controversial that there would seem to be no useful purpose that could be served in any discussion, or recommendations, concerning them." With respect to the sub-marginal carrier, the committee was "loath" to recommend any policy calling for subsidies. Thus it was suggested that the problem of such carrier "be gradually determined through the process of consolidation, merger, and abandonment, subject, in all cases, to the judgment of the commission." To the extent that the House committee's list of "miscellaneous problems" involved modernization programs, the report recommended that the various agencies "should be permitted, and, indeed, expected, to consolidate their efforts in order that by research and otherwise, they may serve individually and cooperatively at the lowest possible cost consistent with adequate service."

The special committee which made the report was headed by August G. Gutheim, attorney, the other members being Giles Morrow, general counsel, Freight Forwarders Institute; Walter McFarland, assistant general counsel, Chicago, Burlington & Quincy; Roland Rice, general counsel, American Trucking Associations, Inc.; and Chester C. Thompson, president, American Waterways Operators, Inc.

N. Y. Traffic Club Officers

At the annual meeting, November 26, 1946, of the Traffic Club of New York, H. L. Lauby was elected president. Mr. Lauby entered service of the Union Pacific at Philadelphia, Pa., in 1910, and held positions of general agent there, and in New York. He was traffic manager at Salt Lake City, Utah, at the time of his appointment as eastern traffic manager, New York, in January, 1941.

H. W. MacArthur, general traffic manage of United States Industrial Chemicals, Inc., was elected first vice-president, and V. G. Berdolt, foreign freight agent of the Wabash, second vice-president. R. J. Wood, freight traffic manager of the Pennsylvania, E. D. Snow, Jr., general eastern freight agent of the New York Central, and R. C. Brugeon, traffic manager of the St. Regis Paper Co., were elected directors.

Railroads Once More Do the "Impossible"

(Continued from page 929)

reduced the average loading to any substantial degree."

If there is a continuation of this evidence that the relaxations are working satisfactorily, O. D. T. will be asked to extend the permits indefinitely, Mr. Kendall added. The 60-day period for which they were issued will expire on December 20.

The C. S. D. chairman also mentioned O. D. T.'s other recent action relaxing its **carload-minimum** order (General Order ODT 18A, Revised) to provide that railroad operating officers might issue special permits authorizing non-observance to prevent undue car detention on an initial line-haul or switching carrier; on complete orders of heavy machinery when no other carload shipment of heavy machinery has been made by the same consignor to the same consignee during the same calendar month; and on articles manufactured to the consignee's specifications in a specific construction or repair project when no further shipments from the same consignor to such projects are scheduled. This relaxation came in Amendment No. 3 to the order, effective November 8. It was designed to aid in relieving the l.c.l. congestion by adjusting a situation wherein the l.c.l. service was being called upon to handle heavy-weight shipments which would normally move in carload service but which were unable to meet the order's minimum-loading requirements.

As to September l.c.l. loadings, Mr. Kendall reported that they set new high records in tonnage and average loading per car. The latter was 20,001 lb., up 10.7 per cent from September, 1945. While he anticipated difficulties so long as the present heavy volume of l.c.l. continues, the C. S. D. chairman nevertheless thought that the situation generally was "obviously encouraging."

No Let-up—The report's section on closed cars set out in considerable detail the difficult box-car situation noted above. During the two 400,000-car weeks, the serviceable ownership of box cars was 700,124. And Mr. Kendall calculated that the average weekly loadings of those two weeks amounted to 57.1 per cent of that ownership, "indicating a high degree of efficiency." The **turn-around time of box cars** was reduced from 12.6 days in September to 12.1 days in October.

Settlement of the East coast and Gulf maritime strikes and the truckers' strike in New York released box cars which were tied up; but there was an immediate need for some of them at the ports for loading of import freight that had piled up on docks and in ships. As to the outlook generally, Mr. Kendall said "present prospects are that heavy industrial demand for box cars will continue and additionally, the requirements for movement of agricultural commodities have further increased."

With respect to stock cars the demand for the normal range movement was already "extremely heavy" when the lifting of Office of Price Administration controls on meat resulted in a "tremendous flash loading of livestock in every section of the country"; and embargo action was necessary at 21 locations. The peak of the flash movement was reached during the two weeks' period ended October 26 when a total of 64,292 cars was loaded. That, Mr. Kendall said, equalled 127.6 per cent of serviceable ownership of 50,393 stock cars. He expects the demand for stock cars to continue heavy to protect the seasonal range movement until the end of the year.

There was no change from the previous report in the situation with respect to automobile cars. In that connection Mr. Kendall said again that the outlook for the automobile manufacturing industry as a whole "does not indicate the possibility of reaching full scale production during the balance of this year."

The C. S. D. chairman's comment on the open top car situation was written before the current miners' strike had got under way; but he attributed some part of the recent past's record loadings to anticipation of the walkout. He went on to note the progress that had been made in making up the production lost in last spring's strike. In June, when that strike was settled, the 1946 coal loadings were about 18 per cent below those of the corresponding 1945 period; as of November 2, this year's loadings were only 1.7 per cent below last year. "Barring labor difficulties, and based on present demands, the deficiency at the end of this year, compared with 1945, should be less than 1 per cent," Mr. Kendall added—somewhat too hopefully, it seems.

Hopper car loadings of other commodities including ore, coke, and road building materials "also continue in excess of the movement last year." Until the advent of winter weather and the close of lake navigation curtails loadings of ore and road building materials, Mr. Kendall expects "extremely heavy" demands for hoppers. The movement of ex-lake iron ore is considerably behind last year's performance; and the C. S. D. chairman anticipates that there may be some all-rail movements of ore from Minnesota next spring before navigation opens.

Gondolas in Demand—Increased operations in the iron and steel industry, and the continued heavy construction program, have resulted in a "very tight gondola car situation throughout the country." Some deficiencies are being reported in the industrial areas of the East, particularly for steel loading, also in the South and Southwest for road building materials and in the Pacific Northwest for lumber and prefabricated houses. Meanwhile, the sugar beet crops in the West and Michigan "are moving currently."

Demands for flat cars "are now as heavy as during the war when military movements required intensive use of this class of equipment." Requirements for loading of lum-

ber and knocked-down housing units in the Pacific Northwest continue "particularly heavy," and 8,000 empty flats have been sent into that area from the Central West since August 15. "Brisk demands" also continue in the Midwest for loading of agricultural machinery.

The supply of covered hoppers continues "very tight" notwithstanding the increase of 30 per cent in ownership since January 1. Mr. Kendall said that these cars are now being used for heavy movements of cement and road building materials; also for certain export grain movements. While the refrigerator car supply at the moment is "reasonably adequate in all production areas," the C. S. D. chairman nevertheless warned that heavy seasonal loading continues to require the maximum practicable utilization of the supply.

The report also included Mr. Kendall's tribute to the late president of the A. A. R., John J. Pelley, whose "untimely death on November 12 . . . is a tragic loss to the railroad industry and leaves an irreparable void in the hearts of his friends and associates." "After a mature career in positions of executive responsibility," the tribute continued, "Mr. Pelley took the helm of the reorganized and enlarged Association of American Railroads in 1934. His concept of his responsibilities comprised a strengthening of inter-industry relationships and a conduct of the business of railroad transportation such as to earn the respect, confidence and support of its patrons, of government and of the public at large. He was rewarded by the performance of an unprecedented volume of transportation in the war years, with the maximum of governmental cooperation, instead of control, and with the grateful applause of a united body of shippers, whose sympathetic and intelligent support contributed in a major degree to the achievement."

R. R. Young Announces Credit Travel Plan for C. & O.

Robert R. Young, chairman of the Chesapeake & Ohio lines, announced on November 23 the latest step in his campaign to make train travel easier. It is the "reserve-it-and-pay-as-you-go" plan for ticket sales which, he said, should be available on the C. & O., the Pere Marquette and the New York, Chicago & St. Louis sometime next January. Under the plan, which is similar to that now in effect on the streamlined "Pere Marquettes," travelers may telephone in advance for either a coach seat or Pullman space, go directly to the train without stopping at the ticket window, occupy the reserved space and pay for the ticket on board.

"Among the many discouraging factors in rail travel today," Mr. Young said, "are first the interminable waiting on a ticket line for a Pullman reservation—sometimes days in advance of the journey—and second, the risk of boarding an overcrowded coach, although the trip was planned months in advance, without the assurance of a seat. Eventually, the new plan should eliminate the annoyance of the ticket window entirely."

Supplementary to the plan will be a new credit card system for C. & O. travelers. This is the first time in a century of railroading in America, the announcement said, that a credit service has been made generally available to passengers, although the airlines have used the system for a number of years. (The Railroad Passenger Interterritorial Committee has been soliciting the views of customers as to several proposals for instituting a credit plan for the purchase of tickets, as reported in *Railway Age* of September 14, page 446.) The C. & O. credit plan, it is claimed, transcends in privileges that of the airlines since it will be possible for any financially responsible individual anywhere in the United States to apply for and receive credit with the railroad without posting a credit balance.

Holders of credit cards may use them instead of paying cash. In the case of Pullman space, however, the credit card will be necessary on the "pay-as-you-go" plan since Pullman space carries a penalty if not used or properly cancelled. Detailed arrangements for this new service are being worked out and the C. & O. is seeking the help of other organizations whose cooperation is needed, the announcement concluded.

Building Two Streamliners for Chicago-Grand Rapids Run

The Chesapeake & Ohio has announced plans to put in service, on the 184-mile Chicago division of the Pere Marquette, two 12-car, streamlined trains, operating on fast schedules between Chicago and Grand Rapids, Mich. Coordinated with these streamliners at Holland, Mich., will be a tie-in streamlined service to and from Muskegon. Twenty-six of the 284 units of passenger equipment embraced in the $26,000,000 order placed with the Pullman-Standard Car Manufacturing Company on November 19 (see the *Railway Age* for last week, page 902), will be earmarked for use in the new streamliners. The 26 units include 14 lounge coaches, 2 tavern-lounge coaches, 4 parlor cars, 3 dining cars and 3 mail and baggage combination cars. From these units, a streamlined parlor car and coach and mail-and-baggage car will be allocated to the handling of the Muskegon-Chicago business. A total of 561 seats—60 in the parlor cars and 501 in the coaches—will be available on each of these trains for Grand Rapids, Muskegon, and Chicago traffic.

Plans are on foot to reduce the running time between Grand Rapids and Chicago by as much as 50 minutes or an hour, it was stated. The tentative overall schedule for the new trains calls for 3 hours and 30 minutes as compared with 4 hours and 20 minutes and 4 hours and 35 minutes for the trains now operating between Chicago and Grand Rapids. The plan of operation provides a morning service in each direction and an early evening service in each direction.

For the first three months of operation, August 10 to November 9, the C. & O. management reports its new "Pere Marquettes" transported a total of 102,031 revenue passengers, or 74 per cent more than the 58,613 revenue passengers transported in the like period last year on the trains in operation at that time between Detroit, Mich., and Grand Rapids. Receipts from the operations of the "Pere Marquettes" are running at a rate which indicate prospective full-year revenues of approximately $1,250,000, regarded by the management as a highly satisfactory level of revenues for a service charging minimum coach fares exclusively. Both coach and first class rates applied on the trains formerly operating on this run.

Damage Claims Rise Sharply in First Eight Months

Loss and damage claims on eggs handled in carload lots by United States and Canadian Class I roads totaled $1,417,861 for the first eight months of 1946, compared with $711,115 for the corresponding period of 1945, an increase of 99.4 per cent, according to a statement by the Freight Claim division of the Association of American Railroads. Claims on eggs, l. c. l., during this period of 1946 rose 173.2 per cent over the same period of 1945, from $9,043 to $27,707, the division said.

The amount of claim payments on furniture for this period was also revealed in the statement. On carload shipments of furniture, the total amount of claims paid during the first three-fourths of the year fell from $740,265 in 1945 to $706,328 in 1946, or 4.6 per cent. On the other hand, claims on furniture, l. c. l., advanced 18 per cent 1946 over 1945, rising from $2,933,811 to $3,461,867.

Club Meetings

The Indianapolis Car Inspection Association will meet at 7 p. m., December 2, in the Union Station, Indianapolis, Ind. A regular business meeting and the election of officers for the year 1947 have been scheduled.

The Northwest Car Men's Association has scheduled a meeting on December 2 at 8 p. m. at the Midway Club, St. Paul, Minn. A color and sound film, "In Step With the Time," pertaining to laboratory test cars and what goes on underneath cars in actual service, will be shown.

A meeting of the New England Railroad Club will be held at the Hotel Vendome, Boston, Mass., on December 10 at 6:30 p. m. R. J. Fletcher, general counsel of the Boston & Maine, will present a paper entitled "The Place of the Law Department in a Railroad Organization."

The Central Railway Club of Buffalo will meet on December 12 in the Statler hotel, Buffalo, N. Y., at 8 p. m. The speaker will be D. B. Robertson, president of the Brotherhood of Locomotive Firemen & Enginemen.

Retirement Board Officers

George F. Pusack, director of wage and service records of the Railroad Retirement Board at Chicago, has been appointed director of finance and budget officer. He is succeeded by Rutherford T. Taylor.

General Robert H. Wylie Retires

The retirement of Brigadier General Robert H. Wylie, assistant chief of transportation for operations, United States Army, has been announced by the War Department. General Wylie will start his retirement leave on January 1, 1947, and on January 15 will assume civilian duties as manager of the port of San Francisco, Calif., an appointment he recently accepted from the California Board of State Harbor Commissioners.

With the Government Agencies

Future of Passenger Service Seen Bright

Place testimony, Justice Department action mark Pullman hearing

Identification of officers of the Pullman Company, Pullman, Inc., and the Pullman-Standard Car Manufacturing Company of letters and other documents received or initiated by them or their respective organizations since January 1, 1945, and testimony by Willard F. Place, vice-president, finance, of the New York Central, as to the future passenger program of the railroads marked the continuation this week of hearings before Interstate Commerce Commission Examiners Howard Hosmer and O. G. Barber, in the No. 29592 proceeding, wherein a so-called buying group of 46 roads seek commission approval to purchase the sleeping car business of the Pullman Company.

The appearance of the Pullman officers—David A. Crawford, president of the Pullman Company and Pullman, Inc.; John F. Lane, secretary-treasurer of Pullman, Inc., and secretary of the Pullman Company, and J. A. Knowlton, secretary of Pullman-Standard—was the result of *duces tecum* subpoenas issued by the commission at the request of the Department of Justice in order that the latter agency could examine stockholder lists, stock transfers and other communications relating to transactions involving the Pullman companies since January 1, 1945.

In its petition for the subpoenas, the Justice Department said that Section 5 of the Interstate Commerce Act requires the I. C. C., before it acts favorably on an application similar to the one pending, to make a finding that the proposal will not unduly restrain competition.

"The district court . . . for the Eastern District of Pennsylvania, in *United States* v. *The Pullman Company, et al,* found that because of the interlocking control between Pullman, Inc., Pullman-Standard and the Pullman Company, the monopoly of the Pullman Company over the operation and servicing of sleeping cars was an important factor in and aid to the monopoly of the Pullman-Standard over the manufacture and sale of sleeping cars," the Justice Department said. "The Interstate Commerce Commission must take cognizance of the finding by the district court that there was real and imminent danger that the illegal monopoly by Pullman-Standard over the manufacture and sale of sleeping cars would be continued and preserved and protected if there is a community of interest between Pullman, Inc., Pullman-Standard and the railroads proposing to purchase the Pullman Company.

Mr. Berge Is Suspicious—"The information sought by the subpoenas will produce definite evidence, whether, in fact, there are at present interlocking directorates between Pullman, Inc., Pullman-Standard and any of the railroads who propose to purchase the capital stock of the Pullman Company, whether there is such a common financial interest between the railroads and Pullman, Inc., and Pullman-Standard as to be likely to continue the kind of tie-up found to be illegal by the court and sought to be prevented by the court's decision, and whether the change which has taken place in recent months in the directorate of Pullman, Inc., has been in form only, through the resignation of certain directors and their replacement by other directors having identical or similar interests, thus perpetuating the same controls which the court condemned and sought to prevent."

Attorneys representing the anti-trust division of the Department of Justice at the November 26 session were granted an additional day in which to examine the documents, which the Pullman officers had identified for them earlier the same day. The Justice Department representatives said that they would disclose their "future steps" in the proceeding upon completion of such examination.

Among those named in the Justice Department's subpoenas, in addition to those who have already testified, were Richard K. Mellon, chairman of the Mellon National Bank & Trust Company, Pittsburgh, Pa.; Henry S. Sturgess, First National Bank, New York; and Furney Johnston, Birmingham, Ala. Examiner Hosmer said it is possible that these men, also under subpoena by the Chesapeake & Ohio—which also is opposing the buying group's plan—may be excused from appearing, but that their prepared testimony would be submitted.

Passenger Progress—According to Mr. Place, notable progress was made by the railroad industry in providing improved passenger service preceding this country's entry into World War II, and although the necessities of the total war effort "arrested this progress," the record is one of "achievement" and was reflected in "efficient handling of the unprecedented passenger traffic of the war period."

Mr. Place said that the air-conditioning program inaugurated in the early 1930's was done by the railroads "of their own initiative" and "in the face of an original cost of $18,000 or more per car." He said that technological improvements in design and installation brought about by the research and study of the railroads themselves "subsequently reduced this figure about 65 per cent" and "thus made practicable proportionately more extensive installation so far as cost was concerned."

"From its inception, air conditioning spread rapidly over all the important passenger-carrying railroads," he continued.

(*Continued on page 938*)

Rail Rates in South Assailed by Berge

Assistant attorney general says only anti-trust laws can halt discrimination

"The South will never be freed of unfair discriminations until the carriers are made to observe strictly the requirements of the anti-trust law," Wendell Berge, assistant attorney general of the United States, asserted in a November 22 speech before a meeting of the Southern Economic Association in Birmingham, Ala.

Addressing the group on "Monopoly and the South," Mr. Berge declared that freight rates have been arranged so as to permit the East to draw materials out of the South cheaply, and, at the same time, to hinder any attempt of the South to export finished products on a large scale. He said that such a rate structure has "quite effectively" deprived the South of much of the advantage and profit that would come from processing its own raw materials.

"Under existing rates, most finished products move much greater distances for an equal amount of money when made in the Northeast than when processed in the South," he continued. "Thus, in any attempt of a southern manufacturer to compete with an eastern manufacturer in a market from which each is equi-distant, the southern manufacturer is beaten before he starts."

Mr. Berge asserted that the system of rate making "by which the railroads have to cover the country with private agreements, maintaining rates at non-competitive and discriminatory levels has undoubtedly worked against the South's best interests." For those who wanted to look into the matter further he recommended "careful study" of the allegations and evidence in *State of Georgia v. Pennsylvania Railroad Company,* the so-called Georgia complaint against the principal southern and eastern railroads, which was brought as an original action before the Supreme Court of the United States.

As to the type of evidence "with which the record abounds," Mr. Berge declared that on October 11, 1941, the Southern submitted to the Southern Freight Association a proposal for a reduced rate on logs over its line from certain points in northeastern Alabama to Altavista, Va. He said that the carrier's proposal stated that the Southern felt that the reduced rate was necessary in order to enable the logs to move from the Alabama points.

"When the proposal was submitted by the . . . association to its members," he continued, "there were objections predicated upon the supposedly dangerous competitive influences that might be set in motion by the proposed rates.

Selected Income and Balance-Sheet Items of Class I Steam Railways

Compiled from 129 reports (Form IBS) representing 133 steam railways
(Switching and Terminal Companies Not Included)

Income Items	All Class I Railways			
	For the month of August		For the eight months of	
	1946	1945	1946	1945
1. Net railway operating income	$81,693,252	$87,496,885	$298,401,454	$735,012,862
2. Other income	14,796,967	13,681,283	117,677,311	123,769,773
3. Total income	96,490,219	101,178,168	416,078,765	858,782,635
4. Miscellaneous deductions from income	2,902,583	2,396,596	19,397,263	20,460,338
5. Income available for fixed charges	93,587,636	98,781,572	396,681,502	838,322,297
6. Fixed charges:				
6-01. Rent for leased roads and equipment	10,597,626	12,101,496	79,263,215	98,427,257
6-02. Interest deductions[1]	27,454,413	30,586,247	234,815,724	250,364,563
6-03. Other deductions	123,186	112,724	968,492	889,461
6-04. Total fixed charges	38,175,225	42,800,467	315,047,431	349,681,281
7. Income after fixed charges	55,412,411	55,981,105	81,634,071	488,641,016
8. Contingent charges	2,868,091	3,332,277	23,985,721	26,532,342
9. Net income[2]	52,544,320	52,648,828	57,648,350	462,108,674
10. Depreciation (Way and structures and Equipment)	28,477,162	28,040,325	227,442,656	221,686,229
11. Amortization of defense projects	973,152	20,065,938	5,845,795	158,090,240
12. Federal income taxes	13,842,776	60,555,020	38,344,810	740,913,274
13. Dividend appropriations:				
On common stock	17,168,139	16,224,948	103,931,651	99,409,603
On preferred stock	4,145,941	4,145,891	30,273,811	26,682,357
Ratio of income to fixed charges (Item 5÷6-04)	2.45	2.31	1.26	2.40

Selected Asset and Liability Items	All Class I Railways	
	Balance at end of August	
	1946	1945
17. Expenditures (gross) for additions and betterments—Road	$139,144,125	$142,489,291
18. Expenditures (gross) for additions and betterments—Equipment	175,162,443	183,583,248
19. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	580,337,658	552,876,256
20. Other unadjusted debits	179,076,527	261,333,962
21. Cash	1,064,837,832	1,241,198,603
22. Temporary cash investments	1,247,939,413	1,907,033,963
23. Special deposits	170,305,761	173,282,891
24. Loans and bills receivable	364,291	419,277
25. Traffic and car-service balances—Dr.	51,080,166	59,310,326
26. Net balance receivable from agents and conductors	114,920,988	125,494,553
27. Miscellaneous accounts receivable	336,110,089	603,822,462
28. Materials and supplies	628,109,951	604,432,803
29. Interest and dividends receivable	23,510,069	36,772,005
30. Accrued accounts receivable	174,531,744	280,949,490
31. Other current assets	34,113,755	62,239,637
32. Total current assets (items 21 to 31)	3,845,824,059	5,094,956,010
40. Funded debt maturing within 6 months[3]	84,368,903	167,759,675
41. Loans and bills payable	11,054,058	5,358,002
42. Traffic and car-service balances—Cr.	117,754,369	183,460,153
43. Audited accounts and wages payable	506,996,982	472,234,308
44. Miscellaneous accounts payable	165,890,377	190,534,404
45. Interest matured unpaid	45,525,059	44,647,007
46. Dividends matured unpaid	8,230,791	7,617,166
47. Unmatured interest accrued	69,887,198	65,564,516
48. Unmatured dividends declared	28,103,114	27,274,664
49. Accrued accounts payable	191,579,689	232,840,524
50. Taxes accrued	652,337,980	1,734,886,447
51. Other current liabilities	114,267,027	107,717,752
52. Total current liabilities (items 41 to 51)	1,911,626,644	3,072,134,943
53. Analysis of taxes accrued:		
U. S. Government taxes	498,244,917	1,555,888,150
Other than U. S. Government taxes	154,093,063	178,998,297
54. Other unadjusted credits	401,768,437	581,412,190

[1] Represents accruals, including the amount in default.
[2] After deduction of the following amounts to create reserves for land grant deductions in dispute: August 1946, $309,352; August 1945, $7,601,407; 8 months of 1946, $2,177,713; 8 months of 1945, $32,319,601.
[3] Includes payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

"Heirarchy" Pictured—"These freight associations are part of a heirarchy of private organizations that pass upon the rates which the individual carriers shall file. The hierarchy is in the shape of a pyramid with fewer and fewer officials from the larger and larger railroads composing the committees as the top of the pyramid is reached. There is an elaborate procedure of appeals whereby the action of a committee on a lower level may be appealed to a committee on a higher level.

"In the instance I am discussing, the proposal for reduced rates on logs was disapproved initially by the General Freight Committee by a majority vote. It was then appealed to the executive committee, where it was again disapproved by a majority vote. Finally, an appeal was taken to the Traffic Executive Association—Southern Territory, where on July 20, 1943, 22 months after the proposal was first filed, it was stricken from the docket."

The speaker said that such an illustration demonstrates the "power of the organized railroads, acting through their various rates committees and executives' associations, to prevent, hinder and delay proposals to reduce rates from becoming effective." He charged that even though the entire movement involved was over the Southern, that road's managerial discretion "was subjected to the concerted judgment of other roads, none of whom were parties to the rate proposed."

As another instance, Mr. Berge said that on June 24, 1941, the Louisville & Nashville submitted a proposal to the S. F. A. effecting a reduction on agricultural implements from points in S. F. A. territory to points in Official territory. He said that the S. F. A. approved the proposed reduction and forwarded it to the Official lines, where it was turned down.

"Thus culminated a 12-year struggle on the part of southern manufacturers of agricultural implements to market their product in the North," the speaker observed, "a struggle which David E. Lilienthal, former chairman of the Tennessee Valley Authority, described as an example of the economical handicaps that unequal freight rates impose on the South."

In conclusion, Mr. Berge said that the "kind of disadvantage under which the South has long labored" will be only partially corrected "in respect to some kinds of traffic" if the Interstate Commerce Commission's No. 28300 class-rate order, which is now being litigated in the courts, finally becomes effective.

Jersey Central Intervenes in Per Diem Rate Case

The Interstate Commerce Commission has authorized the Central of New Jersey to intervene in the No. 29587 proceeding wherein more than 160 short-line railroads are assailing the February 1, 1945, increase from $1 to $1.15 in the per diem rate for the rental of freight cars and asking that it be cut to 95 cents with an award of reparations. On the per diem matter the commission also has before it O.D.T. Director J. Monroe Johnson's suggestion that the rate should be increased from $1.15 to $2 in an effort to discourage "undue detention" of freight cars by railroads.

Violation of I. C. C. Regulation Costs L. & N. $100

Secretary W. P. Bartel of the Interstate Commerce Commission, has announced that the commission has been advised by the United States attorney for the Eastern District of Illinois, East St. Louis, Ill., that the Louisville & Nashville, entering a plea of guilty to an information in one count which charged violation of Section 235 of the Criminal Code, was fined $100 and costs on November 18.

The fine was imposed as the result of the L. & N.'s failure to comply with the commission's regulations governing the transportation of explosives and other dangerous articles. The specific offense charged the L. & N. with cutting off a freight car placarded "Explosives" while the car was in motion in switching service.

Representation of Employees

The Brotherhood of Locomotive Firemen & Engineers has replaced the Brotherhood of Locomotive Engineers as Railway Labor Act representatives of locomotive engineers employed by the Birmingham Southern, while the Brotherhood of Railroad Trainmen has supplanted the Order of Railway Conductors of America as representatives of dining car stewards employed by the St. Louis-San Francisco, according to the results of recent elections which have been certified by the National Mediation Board.

Results of other elections found the O. of R. C. defeating the B. of R. T., 74 to

59, to retain its right to represent road conductors employed by the Chicago, St. Paul, Minneapolis & Omaha, while Delaware, Lackawanna & Western train porters and attendants, who formerly were without representation, chose the Brotherhood of Sleeping Car Porters.

Johnson Calls for Better Use of Reefers

Colonel J. Monroe Johnson, director of the Office of Defense Transportation, this week urged the railroads, refrigerator car lines and shippers and receivers of perishable freight to increase the efficient use of the available supply of refrigerator cars. Colonel Johnson's request was made in letters addressed to R. V. Fletcher, acting president of the Association of American Railroads, and to J. M. Hood, Carl Giessow and Alonzo Bennett, presidents respectively of the American Short Line Railroad Association, the National Shippers Advisory Boards and the National Industrial Traffic League.

In his appeal, Colonel Johnson stated that more cars are being loaded with perishables this year than ever before and predicted there would be an even heavier demand for refrigerator cars in 1947.

"These loadings are being handled with 14 per cent fewer refrigerator cars than were in service 10 years ago," he said. "New cars on order total 10,298 but the total which will be delivered during the first half of 1947 will not offset the retirement of old and obsolete cars. With the present ownership of cars, including the few in sight for delivery in the first half of 1947, refrigerator car shortages next year will be worse than in the first half of 1946."

Because additional refrigerator car supply can only be made available through increased utilization of existing equipment, Colonel Johnson called upon the heads of the rail and traffic organizations to urge the membership of their organizations to cooperate "wholeheartedly and without reservation" in the following seven-point program:

1. Speeding up road movement of both loaded and empty cars.
2. Reducing terminal delays.
3. Reducing the number of cars and time held for loading.
4. Urging faster loading and unloading.
5. Receivers promptly notifying carrier of release or contemplated release of a car so it may be pulled on first switch.
6. Expedite repairs and eliminate delays in switching cars to and from repair tracks.
7. Have agents request disposition immediately for all loads arriving billed destination for unknown consignees.

Coal Strike Fails to Bring Immediate Rail Embargo

Colonel J. Monroe Johnson, director of the Office of Defense Transportation, announced on November 22 than an examination of coal stocks available for railroad use "will not make it necessary to take immediate action on embargoing rail freight traffic." He further indicated that action on the matter would be postponed "for a period of several days."

The O.D.T. director made the announcement following a conference of O.D.T. officials and representatives of the Association of American Railroads. He said that it was his opinion that the economy of the country would be best served by delaying the issuance of a rail freight embargo as long as practicable. He added that steps already taken to restrict rail passenger service and the reduction in rail service used in the transportation of coal make it possible to extend present rail inventories of coal and provide needed coal supplies for the movement of other rail traffic.

"Arrangements have been made," he continued, "to obtain semi-weekly reports from the railroads on available coal stocks. When it is indicated that supplies are reaching a critical point, necessary action to further restrict rail traffic will be taken."

Meanwhile, Solid Fuels Administrator J. A. Krug on November 23 supplemented the orders "freezing" coal stocks which he issued a week earlier. One of the supplementary orders prohibits any person, including any railroad, from receiving or confiscating coal on track or in transit. Another notified shippers whose mines have not ceased operations or which have resumed production to ship only on orders for lake shipments, public utilities, railroads, steamships and tugboats for bunker or galley fuel, laundries, hospitals, food processing plants and other users "upon which the health or the safety of the community rests."

"No estimate is available yet as to the amount of coal which was taken over by the freeze orders," Mr. Krug said. "We believe that something less than two days' production will be available for distribution to the limited classes of consumers which have been placed in the critical categories set up in the orders. It will be imperative, therefore, for all classes of consumers to begin immediately the most stringent conservation of coal on hand. The government will do everything in its power to avert widespread suffering, but with less than two days' production available for distribution under the emergency orders, it is obvious that only minimum shipments can be allowed for domestic use and only the most critical uses may expect any help from this emergency stock."

The S.F.A.W statement said further that preliminary estimates of coal stocks in consumers' hands indicate a less favorable situation than that prevailing at the beginning of the previous strike last spring. At that time, the statement went on, visible stocks of bituminous coal amounted to 58,531,000 tons, the equivalent of 42 days' supply, whereas present stocks are put at 57,000,000 tons, or 37 days' supply. Moreover, the present consumption rate is "considerably higher because of increased industrial activity and a sharper demand for coal used in domestic heating."

Future of Passenger Service Seen Bright

(Continued from page 936)

"At the end of 1936, a total of 3,741 passenger cars of Class I roads had been equipped with air-conditioning systems. In the succeeding five-year period, the number of air-conditioned passenger cars was more than doubled, 3,786 additional cars having been so equipped during that period. With the advent of this country's entry into the war, the program was of necessity curtailed. Between the end of 1941 and the beginning of 1946, only 724 cars were added to the number air-conditioned. Of these, 504 were added during 1942 and undoubtedly represented projects initiated before Pearl Harbor."

Mr. Place predicted that the program will be extensively resumed and disclosed that the ownership of air-conditioned passenger cars by Class I roads increased by 370 cars during the first six months of 1946. He said that the railroads "bore by far the larger proportion of the cost of installing air-conditioning in Pullman cars," pointing out that the carriers contributed 75 per cent to the cost and the Pullman Company 25 per cent.

With respect to new lightweight passenger equipment, Mr. Place testified that at the end of 1945 there were 135 streamliners in service with a consist of 1,334 units and operating 84,872 miles daily, in addition to "some 1,200" lightweight cars assigned to general service other than all streamline trains. He said that in 1936, there were 21 streamliners having a consist of 175 units and operating 15,021 miles per day, while in the 1937-1941 period, 83 additional streamliners, consisting of 923 units and representing an operation of 59,438 miles daily, were put into service.

Faster Trains—"Coincident with the installation of lightweight streamliners has come increased speed and improved schedules," he continued. "There has been a progressive increase in the overall speed of locomotive-propelled passenger trains. This is illustrated by the increase in the number of daily mile-a-minute runs in passenger service. In 1936, there were 644 such runs covering 40,205 route-miles. In 1941, the number of such runs had increased to 1,462 with a daily mileage of 76,818 miles."

"As indicated by the quantity of new equipment now on order by the railroads," he concluded, "the railroads intend to push vigorously their program of improvement in passenger service."

With the easing up of war-time passenger traffic, patrons again dine in leisure on M. K. T. dining cars

Equipment and Supplies

SIGNALING

The SOUTHERN has ordered equipment from the General Railway Signal Company for the installation of a remote control system at Durmid, Va. The constrol machine, to be installed at Montview, about two miles from the most distant controlled point, will have a 12-in. by 17-in. panel equipped with 13 track indication lights and 6 levers for the control of 3 switch machines, an electric switch lock, and 9 signals, all located at a junction and crossover. Type-SC searchlight signals, Model-10 electric switch locks, Type-K relays, and Model-5C electric switch machines will be used in this installation.

The WHEELING & LAKE ERIE has contracted with the Union Switch & Signal Co., for an installation of an automatic interlocking at crossing of the Cleveland, Cincinnati, Chicago & St. Louis at Clyde, Ohio, involving Style H-2 searchlight home and distant signals on the Wheeling & Lake Erie, and Style TP-5 home signals with fixed yellow reflector-type distant signals on the C. C. C. & St. L., Model SL-6A switch locks on turnout and on derails within the interlocking limits. This project also includes the modernization of highway crossing protection in the town of Clyde.

Supply Trade

Kennametal, Inc., Latrobe, Pa., has announced the opening of an office at room 1605 Court Square building, Baltimore, Md.

H. K. Porter Company, Inc. has announced the moving of its two New Jersey Quimby pump plants to Pittsburgh, Pa.

Drinkwater, Inc., Chicago, has transferred its headquarters to Spring and Madison streets, Waukegan, Ill.

Henry W. Stahl has been appointed eastern divisional representative for the **Klasing Hand Brake Company,** Joliet, Ill., with headquarters in New York.

L. H. Moulton has been appointed national sales director, and **D. T. Buist,** assistant national sales director, of **Turco Products, Inc.,** Los Angeles, Cal.

W. E. Gilbert has been appointed manager of the processing equipment division of the sales department of the **Detrex Corporation,** with headquarters in Detroit, Mich.

Fairbanks, Morse & Co., Chicago, have announced the construction of a new building at their Beloit (Wis.) works, for the manufacture of railway Diesel-electric locomotives.

In the *Railway Age* for November 16, an item reporting the appointment of **Waterhouse & Co.** as sales agents in the railroad field for the **American Tile & Rubber Co.,** erroneously designated the latter organization as the American Tire & Rubber Co.

George M. Humphrey, president of the M. A. Hanna Company, has been elected chairman of the **Pittsburgh Consolidation Coal Company,** to succeed **Robert C. Hill** who has retired as active chairman, but who will continue as a director and honorary chairman of the company.

Torsten H. Parke has been appointed to the sales department, in charge of the New York office, of the **Scullin Steel Company,** to succeed the late **Brownrigg L. Norton,** whose death was reported in the *Railway Age* for September 28.

Frederic E. Lyford has been elected president and a director of the **Merritt-Chapman & Scott Corp.,** construction and marine salvage engineers and contractors. Formerly assistant to the chairman of the board, he succeeds **L. L. Smith,** who has retired after 40 years as president of the organization.

Born in Waverly, N. Y., on January 20, 1895, Mr. Lyford was graduated from Cornell University in 1916 with a degree in

Frederic E. Lyford

mechanical engineering. Employed successively by the Bethlehem Steel Company as an apprentice ship fitter at Sparrows Point, Md., and by the Allied Machinery Company as a factory inspector at New York, he served with the U. S. Army during the first world war with the rank of first lieutenant and was attached to the air service as an observer. He rejoined Allied Machinery in 1919 as assistant sales manager at New York and in 1920 entered sales promotion work for the Tioga Mills at Waverly. Mr. Lyford's railroad career began in 1923, when he joined the Lehigh Valley as an apprentice instructor at Sayre, Pa. Promoted to assistant general machine foreman two years later, he was appointed special engineer to the superintendent of motive power at Sayre in 1928, shortly after which he was made special engineer to the vice-president there. He served as examiner for the railroad division of the Reconstruction Finance Corporation from 1934 to 1936, when he was appointed assistant to the vice-president of the Baldwin Locomotive Works. Appointed trustee of the New York, Ontario & Western in 1937, Mr. Lyford resigned that position on December 1, 1944, to join Merritt-Chapman & Scott as assistant to the chairman of the board.

The **Formica Insulation Company,** Cincinnati, Ohio, has announced the opening of a factory sales office at 3606 Commerce street, Dallas, Texas, under the management of **Morton F. Harvey,** formerly of the sales office in Chicago. **Edward Brown,** it also was announced, has rejoined the Chicago sales office, having recently returned from military service.

Arthur E. Jacobs, whose appointment as vice-president and sales manager of the **Blackmer Pump Company,** Grand Rapids, Mich., was reported in the *Railway Age* of November 23, was trained in mechanical engineering at Lewis Institute of Technology and Chicago Technical College. Mr. Jacobs was formerly general sales manager of the pump division of the George D. Roper Corporation, Rockford, Ill., and was also associated with the Ingersoll Milling Machine Company in that city. For more than 30 years he has been engaged in the design, production and marketing of industrial equipment, chiefly pumps, hydraulic machinery and machine tools. He is chairman of the Rotary Pump section of the Hydraulic Institute.

Financial

CHESAPEAKE & OHIO.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $1,500,000 of 1¼ per cent equipment trust certificates, the proceeds of which will be applied toward the payment of an estimated $1,896,717 for equipment which the applicant plans to acquire, as outlined in *Railway Age,* November 2, page 743. The certificates will be dated December 1 and will mature in 10 equal annual installments, starting December 1, 1947. The report also approves a selling price of 100.071, the bid of Halsey, Stuart & Company, and associates, on which basis the average annual cost will be approximately 1.74 per cent.

CHICAGO & NORTH WESTERN.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $10,140,000 of 2 per cent equipment trust certificates, the proceeds of which will be applied toward the payment of an estimated $13,540,000 for the following equipment which the applicant plans to acquire:

	Description	Estimated Unit Price
7	sleeping cars (16 duplex roomettes, 3 bedrooms, 1 compartment)	$116,000
3	baggage dormitory cars	85,000
2	lunch counter dining cars	114,000
4	dining cars	110,000
1	cafe lounge car	120,000
3	club lounge cars	99,000
2	60-ft. railway postoffice storage mail cars	70,000
1	30-ft. railway postoffice mail and baggage car	71,000

1	sleeping car (2 drawing rooms, 4 bedrooms, 4 compartments)	113,000
2	sleeping cars (4 bedrooms, 16 duplex roomettes)	117,000
1	sleeping car (6 sections, 6 roomettes, 4 bedrooms)	116,500
11	2,000-hp. Diesel-electric passenger locomotives	211,000
1	1,000-hp. Diesel-electric passenger locomotive	155,000
8	4,500-hp. Diesel-electric freight locomotives	448,000
26	passenger coaches (capacity 64 persons)	83,000
1	passenger coach (with nurse's room, capacity 56 persons)	88,000
1	cafe coach	115,000
4	mail baggage cars	67,000
1	dining car	140,000
9	parlor cars	81,000
4	baggage-tap-diner-lounge cars	113,000
140	70-ton covered hopper cars	5,025

As noted in *Railway Age* of October 19, page 663, 19 of the locomotives will be purchased from the Electro-Motive Division of the General Motors Corporation and one from the Baldwin Locomotive Works. The Pullman-Standard Car Manufacturing Company and the American Car & Foundry Company will supply 53 and 20 of the passenger-train cars, respectively, and the hoppers will be acquired from the Bethlehem Steel Company.

The certificates will be dated December 1 and mature in 10 equal annual installments of $1,014,000, starting December 1, 1947. The report also approves a selling price of 100.30 and accrued dividends, the bid of the First Boston Corpporation and Harris, Hall & Company and 12 associates, on which basis the average annual cost to the applicant will be approximately 1.94 per cent.

CHICAGO, ROCK ISLAND & PACIFIC.—*Reorganization Proposal Approved.*—The reorganization plan for this road formulated by Aaron Colnon, co-trustee, whereby its debt structure will be simplified by paying off divisional bondholders and exchanging certain outstanding securities, was approved by Federal Judge Michael L. Igoe, at Chicago, on November 22. (For details of the plan see *Railway Age* of October 5, page 582). The plan, which has been opposed by attorneys for the general mortgage bondholders and first and refunding mortgage bondholders, will be submitted to the bondholders for vote. Execution of the plan was delayed 15 days to permit objecting bondholder groups to file an appeal.

DELAWARE, LACKAWANNA & WESTERN.—*Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to assume liability for $4,000,000 of Series E equipment trust certificates, the proceeds of which will be applied toward the payment of $5,025,000 for 500 50-ton all-steel hoppers, at $3,440 each; 500 50-ton steel sheathed box cars, at $4,135 each, and 15 all-steel coaches, at $82,500 each. The American Car & Foundry Company will supply the coaches and hoppers, and the Magor Car Corporation will furnish the box cars. The certificates, to be sold on the basis of competitive bidding, will be dated December 15, and mature in 20 equal installments, ending December 15, 1956.

DELAWARE, LACKAWANNA & WESTERN.—*Control and Merger of Leased Lines.*—Division 4 of the Interstate Commerce Commission has authorized the merger of the Greene, extending approximately 8.1 miles from Chenango Forks, N. Y., to Greene, into the D. L. & W. for ownership and operation. The D. L. & W. owns all of the Greene's securities and has operated the road under lease since 1870. In another report, the division authorized the D. L. & W. to acquire, through ownership of stock, control of the Cayuga & Susquehanna, and approved the merger of that road into the D. L & W. for ownership and operation. The Cayuga extends approximately 34.2 miles from a connection with the D. L. & W. at Owego, N. Y., to Ithaca, and has been operated under lease by the latter since 1855. The usual employee-protection conditions were prescribed in both cases. The transactions are part of a program instituted several years ago by the Lackawanna to strengthen its financial position by acquiring or merging the properties of its leased lines.

GEORGIA NORTHERN.—*Bonds.*—This road has applied to the Interstate Commerce Commission for authority to issue $350,000 of first mortgage 4 per cent bonds and to sell or exchange $287,000 of them to retire a like amount of first mortgage 6 per cent bonds which mature December 1. The remaining $63,000 of the proposed issue would be retained in the applicant's treasury. The new bonds would be dated December 1 and mature December 1, 1971.

GULF, MOBILE & OHIO.—*Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to assume obligation for $3,600,000 of Series D equipment trust certificates, representing approximately 78.4 per cent of the cost of the following equipment which the applicant intends to acquire: 850 50-ton all-steel box cars, at $3,800 each; 4 1,000-hp. Diesel-electric road switching locomotives, at $98,000 each; 6 1,500-hp. Diesel-electric locomotives, road freight type, A units, at $140,460 each, and 1 1,500-hp. Diesel-electric locomotive, road freight type, B unit, at $127,650. The American Locomotive Company will supply the locomotives and the box cars will be purchased from the American Car & Foundry Company. The certificates would be sold on the basis of competitive bids.

MISSOURI-KANSAS-TEXAS.—*Promissory Notes.*—This road has applied to the Interstate Commerce Commission for authority to issue $1,482,255 in promissory notes to evidence the indebtedness it will assume under conditional sales agreements to be dated November 15. The applicant plans to purchase 100 70-ton covered hoppers from the American Car & Foundry Company for $482,400; 5 1,000-hp. Diesel-electric switching locomotives from the Electro-Motive Division of the General Motors Corporation for $449,990, and 5 1,000-hp. Diesel-electric switching locomotives from the Baldwin Locomotive Works for $449,865. The notes would be sold on the basis of competitive bids, with the interest rates specified in such bids.

NORTHERN PACIFIC.—*Equipment Trust Certificates.*—This road has sold, subject to approval by the Interstate Commerce Commission, $6,880,000 of equipment trust certificates to Halsey, Stuart & Company, which bid $98,718, specifying a 1¾ per cent interest rate. (See *Railway Age* for November 16, page 854.)

UNION PACIFIC.—*New Director.*—John S. Sinclair, executive vice-president and a director of the New York Life Insurance Company, has been elected a director of this road.

VALLEY.—*Acquisition.*—The Susquehanna Chemical Corporation, Bradford, Pa., has applied to the Interstate Commerce Commission for authority to acquire, through ownership of stock, control of the Valley, which owns and operates approximately 1 mile of track between Westline, Pa., and Kinuza Junction, and operates under lease in the same locality approximately 15 miles of branch lines of the Pennsylvania. The chemical company entered an agreement with the Valley on May 1 to purchase, subject to commission approval, that road's outstanding stock for $10,000 cash.

WESTERN MARYLAND.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $2,740,000 of 1¾ per cent Series K equipment trust certificates, the proceeds of which will be applied toward the payment of $3,430,600 for equipment which the applicant plans to acquire, as outlined in *Railway Age*, November 9, page 779. The certificates will be dated November 15 and will mature in 10 annual installments of $274,000 each starting November 15, 1947. The report also approves a selling price of 99.279, the bid of Halsey, Stuart & Company, on which basis the average annual cost to the applicant will be approximately 1.89 per cent.

Average Prices Stocks and Bonds

	Nov. 26	Last week	Last year
Average price of 20 representative railway stocks..	48.78	48.26	62.70
Average price of 20 representative railway bonds..	89.49	89.98	99.93

Dividends Declared

Atlanta & West Point.—$2.00 payable December 12 to holders of record December 5.

Bangor & Aroostook.—5% preferred, $1.25, quarterly, payable January 1 to holders of record December 6.

Beech Creek.—50¢, quarterly, payable January 2 to holders of record December 6.

Boston & Albany.—$2.25, payable December 31 to holders of record November 30.

Chesapeake & Ohio.—75¢, payable January 2 to holders of record December 6; extra, 5¢, payable December 31 to holders of record December 14.

Chestnut Hill.—50¢, reduced quarterly, payable December 4 to holders of record November 20.

East Mahanoy.—$1.25, semi-annually, payable December 16 to holders of record December 5.

Erie.—50¢, semi-annually, payable December 20 to holders of record December 3.

Erie & Pittsburgh.—7% guaranteed, 80¢, quarterly, payable December 10 to holders of record November 30.

Mobile & Birmingham.—4% preferred, $1.50, semi-annually, payable January 2 to holders of record November 30.

New York & Harlem.—$2.50, semi-annually, payable January 2 to holders of record December 13.

Philadelphia, Germantown & Norristown.—$1.50, quarterly, payable December 4 to holders of record November 20.

Texas & Pacific.—$4.00, payable December 20 to holders of record December 6.

Union Pacific.—$1.50, quarterly, payable January 2 to holders of record December 2.

Western of Alabama.—$2.50, payable December 12 to holders of record December 5.

Railway Officers

EXECUTIVE

J. P. Horne has been elected president of the Oneida & Western with headquarters at Jewell Ridge, Va. **Howard H. Baker** has been elected vice-president and general counselor, with headquarters at Huntsville, Tenn.

M. J. McNamara, whose promotion to assistant to chief executive officer of the St. Louis Southwestern, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of November 2, was born on

M. J. McNamara

September 9, 1891, at St. Louis. He entered railway service in 1907 with the Southern Freight Association, holding various clerical positions until 1913, when he joined the Missouri Pacific. From that date until 1920 he held successively the positions of stenographer, secretary and clerk. Mr. McNamara joined the Cotton Belt in 1920, working as clerk and later chief clerk to the vice-president-operations. In 1926 he was advanced to transportation assistant, which position he held until his recent promotion.

Dean F. Willey, assistant vice-president in charge of operating, maintenance and engineering of the New York, New Haven & Hartford, with headquarters at New Haven, Conn., has been promoted to vice-president in charge of operating, maintenance and engineering, with the same headquarters. A photograph of Mr. Willey and a biographical sketch of his railway career were published in the *Railway Age* of July 13, page 76, in connection with his appointment as assistant vice-president. **Robert L. Pearson,** operating vice-president at New Haven, has been appointed vice-president, executive department, with headquarters at New Haven.

Clement A. Whonsetler, whose election as vice-president in charge of finance of the Chicago North Shore & Milwaukee, with headquarters at Chicago, was reported in the *Railway Age* of November 9, was born in Swan township, Ind., on November 26, 1885. He began his career in 1903 as stenographer and chief clerk to general manager of the Indianapolis & Northwestern Traction Co., and in 1905 became chief clerk to general manager of the Terre Haute, Indianapolis & Eastern Traction Co. Mr. Whonsetler served as secretary to vice-president and general manager, Aurora, Elgin & Chicago (now Chicago, Aurora & Elgin), from 1910 to 1919. In the latter year he became auditor of the A. E. & C. and in 1922 was also auditor of the C. A. & E. From 1926 to 1932 he served as secretary and treasurer, and assistant to financial officer of the C. A. & E., and in 1929 became assistant to financial officer of Chicago Rapid Transit Company. In 1941 he was made financial officer for trustees of the latter organization, the C. N. S. & M. and the C. A. & E. In addition to his new position, Mr. Whonsetler remains as financial officer of the Chicago Rapid Transit Company.

FINANCIAL, LEGAL AND ACCOUNTING

T. W. Chambers has been elected treasurer of the Oneida & Western, with headquarters at Tazewell, Va.

E. C. Duke has been appointed auditor of miscellaneous accounts, Nashville, Chattanooga & St. Louis, with headquarters at Nashville, Tenn.

H. J. Bearss, whose promotion to auditor of passenger accounts of the Union Pacific, with headquarters at Omaha, Neb., was reported in the *Railway Age* of November 23, entered the service of the U. P. in 1920 at Portland, Ore. Mr. Bearss remained there until 1936 when he was transferred to Omaha, and in October of that

H. J. Bearss

year he took a leave of absence to serve on the Public Utilities Commission of Oregon. In 1940 he returned to the road's freight accounting department at Omaha, and the following year he was assigned to the general auditor's office there as statistician. He held this position at the time of his recent promotion.

OPERATING

Clare A. Mulvihill, general agent, refrigerator department of the Atchison, Topeka & Santa Fe, with headquarters at Seattle, Wash., has been appointed assistant manager of that department, with headquarters at Los Angeles, Cal.

R. C. Parsons, whose promotion to general manager of the Louisville & Nashville, with headquarters at Louisville, Ky., was reported in the *Railway Age* of November 9, was born at Livingston, Ky., and entered service of the L. & N. in 1905, as a telegraph operator. From 1907 to 1911 Mr. Parsons was employed as telegraph operator on several roads, and in the latter year he rejoined the L. & N. as telegraph operator at Earlington, Ky. In 1913 he was promoted to dispatcher, which position he held at various points until 1917, when he was promoted to assistant and night chief dispatcher of the Eastern Kentucky division. In 1918 he was promoted to assistant trainmaster, and in 1920 was made

R. C. Parsons

system car distributor at Louisville. Other positions held by Mr. Parsons have been: Chairman of the mine rating bureau; assistant superintendent of transportation; superintendent of transportation, and later also director of personnel; assistant vice-president and director of personnel. He was made assistant vice-president-assistant general manager (transportation and mechanical) on June 6, 1941, which position he held at the time of his recent promotion.

C. F. Morrison has been appointed trainmaster of the Kansas City Terminal division of the Missouri Pacific, with headquarters at Kansas City, Mo.

TRAFFIC

G. H. Sorensen has been appointed district traffic agent of the Illinois Central, with headquarters at Waterloo, Iowa.

C. E. Darkus has been appointed general agent, passenger department, of the Southern Pacific, with headquarters at Chicago.

C. L. Corcoran has been appointed general agent of the Tennessee Central, with headquarters at St. Louis, Mo.

H. K. Worsham has been appointed district passenger agent of the Kansas City Southern, with headquarters at Shreveport, La.

Earl F. Spencer has been appointed agricultural agent of the Union Pacific,

with headquarters at Denver, Colo., succeeding **John H. Beckwith,** who has been transferred to Omaha, Neb.

J. T. Leze, district passenger agent of the Missouri Pacific, has been appointed general agent, passenger department, with headquarters as before at New Orleans, La.

R. F. Kelaher, general agent of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Buffalo, N. Y., has been transferred to Boston, Mass., succeeding **G. H. O'Brien,** who died on October 29. **W. A. Stauffer,** assistant general agent at Philadelphia, Pa., has been promoted to general agent at Buffalo, succeeding Mr. Kelaher.

O. P. Bartlett, whose retirement as passenger traffic manager of the Southern Pacific at Chicago, effective November 30, was reported in the *Railway Age* of November 23, began his railroad career with the Louisville & Nashville at Montgomery, Ala., in 1891. In 1903 he was advanced to general agent at Jacksonville, Fla., and in 1906 he was transferred to New Orleans, La., in that position. He joined the Southern Pacific as general agent at Birmingham, Ala., in 1911, holding that position

O. P. Bartlett

also at Cincinnati, Ohio, beginning in 1914. In 1916 he became assistant general agent at Chicago, and later the same year was made general eastern freight agent at New York. In 1925 he returned to Chicago as assistant to vice-president in charge of traffic, and in 1929 he was advanced to the position of passenger traffic manager.

Joseph W. Clark has been appointed freight traffic agent of the Central of Georgia, with headquarters at Macon, Ga., succeeding **H. I. Carpenter,** who has resigned.

Robert E. Spalding has been appointed division freight and passenger agent of the Southern, with headquarters at Louisville, Ky. **Lester P. Stiebling** has been appointed district freight and passenger agent at that headquarters.

J. L. Scales, assistant freight traffic manager of the St. Louis-San Francisco, with headquarters at St. Louis, Mo., has been appointed foreign freight traffic manager, with the same headquarters. A photograph of Mr. Scales, and a sketch of his career, appeared in the *Railway Age* of December 15, 1945, in connection with his promotion to assistant freight traffic manager.

L. C. Ioas, whose promotion to passenger traffic manager of the Southern Pacific at Chicago, effective on December 1, was reported in the *Railway Age* of November 23, was born on February 15, 1896, at

L. C. Ioas

Wilmington, Ill., and began his railroad career with the Chicago, Indianapolis & Louisville in 1912 at Chicago. Mr. Ioas in 1919 joined the Southern Pacific as a stenographer at San Francisco, and later became a private secretary in the road's executive department there. He was transferred to the passenger department in 1923, and subsequently advanced to the positions of traveling passenger agent, chief of train service and supervisor of train service, successively. In 1942 he was advanced to assistant to vice-president of system passenger traffic, and in 1945 he became senior assistant. He holds the latter position at this time.

R. S. White, general agent of the Missouri-Illinois, with headquarters at Pittsburgh, Pa., has been appointed general eastern agent, with headquarters at New York. **Floyd Sutterfield** has been appointed general agent at Pittsburgh, succeeding Mr. White.

George B. Hanson, general passenger agent of the Southern Pacific, with headquarters at Los Angeles, Cal., will be promoted to passenger traffic manager, with the same headquarters, effective December 1. **Nels Kinnel,** assistant general passenger agent at Los Angeles, will be advanced to assistant passenger traffic manager there. **T. C. Keedy,** assistant to general passenger agent, will be promoted to assistant to passenger traffic manager, with headquarters as before at Los Angeles.

J. P. Christie, assistant general freight agent of the New York, Chicago & St. Louis, with headquarters at Buffalo, N. Y., has been appointed division freight agent at St. Louis, Mo., succeeding **C. F. Tall,** whose promotion to assistant general freight agent at St. Louis was reported in the *Railway Age* of November 2. Mr. Christie is succeeded at Buffalo by **A. E. Herrmann,** general agent, traffic department, at Kansas City, Mo. Mr. Herrmann is succeeded at Kansas City by **A. W. Vanderpoel.**

R. W. Hart, assistant general freight agent of the New York Central system, with headquarters at Cleveland, Ohio, has been promoted to general freight agent, with the same headquarters, succeeding **W. D. McVey,** who has retired under pension regulations after nearly 50 years of service with that road. **A. J. Crookshank,** industrial agent, has been appointed assistant general freight agent, with headquarters as before at Cleveland, succeeding Mr. Hart. **E. M. Johns,** general agent at Cleveland, has been appointed industrial agent, with the same headquarters, succeeding Mr. Crookshank. **H. T. Miller** has been appointed general agent at Cleveland, succeeding Mr. Johns.

H. L. Schaeffer, whose promotion to general freight traffic manager of the Missouri Pacific, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of November 2, was born at St. Louis on March 12, 1902, and attended Brown's Business College and Benton College of Law at St. Louis, graduating from the latter in 1925. He entered railway service

H. L. Schaeffer

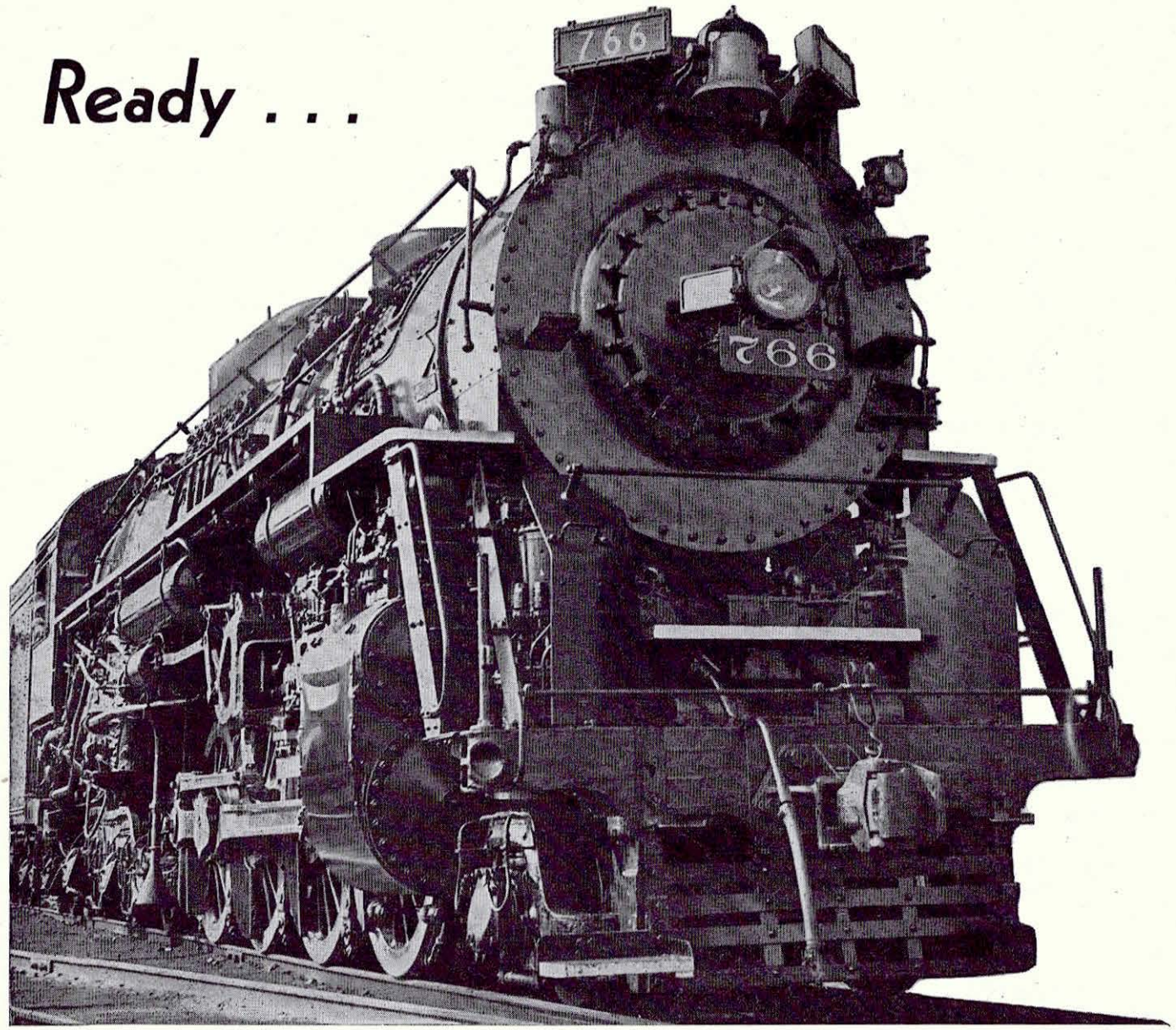
in April, 1916, as a messenger boy on the Missouri Pacific at St. Louis, and was later advanced to office boy and clerk-stenographer at that point. In August, 1919, he went with the Missouri-Kansas-Texas as a clerk-stenographer at Wichita Falls, Tex., and four months later he was promoted to secretary to the superintendent at Sedalia, Mo. In March, 1920, Mr. Schaeffer returned to the Missouri Pacific as secretary to the district engineer at St. Louis, later serving as secretary to the contract attorney, and assistant secretary to the general manager. In December, 1923, he was advanced to chief clerk to the passenger traffic manager, and in August, 1927, he was promoted to assistant general passenger agent at St. Louis. Mr. Schaeffer was transferred to Kansas City, Mo., in February, 1935, and in August, 1941, he was advanced to assistant passenger traffic manager at St. Louis. On May 1, 1943, he was promoted to general passenger traffic manager, which position he held at the time of his current promotion.

ENGINEERING & SIGNALING

J. C. Bussey, whose appointment as chief engineer of the Chicago, Indianapolis & Louisville, with headquarters at Lafayette,

News Department continued on next left-hand page

Ready . . .



to meet the demand for higher speeds at lower costs

The Nickel Plate's enviable record of handling heavy freights on long runs at sustained high speeds has been partially made possible through its fleet of fifty-five modern Lima-built 2-8-4 steam locomotives which this far-sighted railroad has placed in service during the last five years.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED INCORPORATED, LIMA, OHIO

Ind., was reported in the *Railway Age* of November 9, was born at Parksville, S. C., in 1900, and was graduated from Clemson college in 1922, with a B. S. degree in civil engineering. He entered railroad service

J. C. Bussey

with the Seaboard Air Line in 1922, and advanced through its engineering department at Norfolk, Va., to the position of chief draftsman. In 1928 he became assistant engineer of the Cincinnati Union Terminal Company, at Cincinnati, Ohio, and since 1934 has been its maintenance engineer.

C. P. Howard has been appointed chief engineer of the Oneida & Western, with headquarters at Jewell Ridge, Va.

H. S. Deubelbeiss, assistant engineer in the office of the chief engineer of the Canadian Pacific, with headquarters at Montreal, Que., has retired.

SPECIAL

W. P. Stewart, supervisor of scrap and reclamation of the Illinois Central, with headquarters at Chicago, will retire on December 1, following 43 years of railroad service.

Thomas J. Deegan, Jr., vice-president of Abbott Kimball Co., Inc., advertising agency, has joined the personal staff in New York of Robert R. Young, chairman of the boards of the Chesapeake & Ohio and the Alleghany Corporation. In addition Mr. Deegan has been appointed director of public relations of the Chesapeake & Ohio, the Pere Marquette and the New York, Chicago & St. Louis. He will continue with the advertising agency in an advisory capacity.

Dr. William T. Davis, chief of medical service of Moses Taylor hospital, Scranton, Pa., has been appointed chief medical officer of the Delaware, Lackawanna & Western, to succeed **Dr. J. Norman White,** who will retire as chief surgeon on December 1. Dr. Davis was graduated from the Medico-Chirurgical College, Philadelphia, in 1911. His career has been devoted to the practice of medicine in Scranton, supplemented by several years as chief of medical service of Moses Taylor hospital.

MECHANICAL

Bruce C. Gunnell, whose appointment as chief mehanical engineer of the Southern, at Washington, D. C., was announced in the *Railway Age* of October 5, was born on December 16, 1907, at Washington. Mr. Gunnell attended elementary and high schools at Ames, Iowa, and was graduated from the University of Virginia in 1932 with B. S. and M. E. degrees in engineering. Entering the service of the Southern in October, 1935, as assistant mechanical engineer at Alexandria, Va., he subsequently served as night roundhouse foreman at Winston-Salem, N. C., Danville, Va., and at Greensboro, N. C. Prior to his association with the Southern, Mr. Gunnell served for a brief time with the U. S. Army Engineer Corps in various capacities and with the General Chemical Company of Baltimore, Md., as apprentice mechanical engineer. In June, 1942, he was furloughed by the Southern for military service with the Army Transportation Corps and served in the Middle East, Italy, and England. Receiving his honorable discharge as a

Bruce C. Gunnell

major in December, 1945, Mr. Gunnell returned to the Southern as Diesel engineer at Washington, the post he was maintaining at the time of his recent promotion.

OBITUARY

J. M. Greenwood, general safety agent of the New York Central system, with headquarters at New York, died suddenly on November 20 in a sleeping car in the station at Indianapolis, Ind., where he was preparing to make a business trip to Cleveland, Ohio. Mr. Greenwood was 59 years old.

Addison R. Smith, retired vice-president of the Louisville & Nashville, whose death on November 5, was reported in the *Railway Age* of November 9, was born at Louisville on March 30, 1872, and entered railway service as a clerk of the L. & N. on July 1, 1889. He held several positions, and also served as secretary of the Southeastern Mississippi Valley Association, until July 10, 1899, when he went with the Southern as chief clerk to the assistant freight traffic manager at Louisville. On January 1, 1904, Mr. Smith became general freight agent of the Western of Alabama and the Atlanta & West Point, with headquarters at Montgomery, Ala. In June, 1905, he returned to the L. & N. and was elected third vice-president. In 1918 he was appointed assistant regional director, Southern region, United States Railroad Administration, remaining in that position until the end of federal control. On March 1, 1920, Mr. Smith returned to the L. & N. as vice-president in charge of traffic, the position he held at the time of his retirement in April, 1945.

Clarence Benjamin Heiserman, who retired in 1932 as vice-president and general counsel of the Pennsylvania at Philadelphia, Pa., died at Bryn Mawr (Pa.), hospital on November 23, at the age of 84. Mr. Heiserman was born on September 18, 1862, at Urbana, Champaign county, Ohio, and was graduated in 1884 from Ohio Wesleyan University. He was admitted to the Ohio bar in December, 1887, and from 1889 to 1894 he was prosecuting attorney of Champaign county. From 1894 to 1899 he was judge of the common pleas court for the second judicial district of Ohio. He entered railroad service in 1905 as solicitor for the Pittsburgh, Cincinnati, Chicago & St. Louis (now Pennsylvania) at Urbana and served successfully as general solicitor of the Pennsylvania Lines West of Pittsburgh, general counsel of those lines, and general counsed of the system, until 1923, when he was appointed vice-president and general counsel of the Pennsylvania, the Long Island and the Baltimore & Eastern, which position he held until October 1, 1932. After his retirement on the latter date, Mr. Heiserman acted as special counsel for the Pennsylvania for several years.

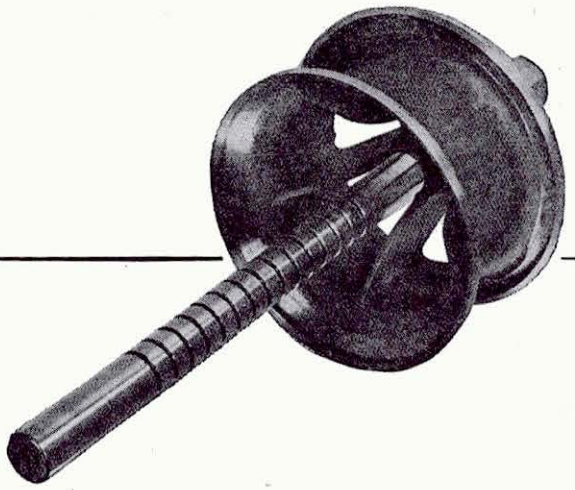
Louis Yager, assistant chief engineer of the Northern Pacific, with headquarters at St. Paul, Minn., died on November 22 at the Northern Pacific hospital, St. Paul. He was 69 years old and had served with the Northern Pacific for 46 years. Mr. Yager was born at Germantown, Wis., on July 12, 1887, and received his higher education at the University of Minnesota. He entered railroad service in 1900 as a rodman on the Northern Pacific. From 1901 to 1902 he served as assistant engineer on construction; from 1902 to 1907 as supervisor of bridges and buildings at Minneapolis, Minn.; and from 1907 to 1910 as assistant engineer on the St. Louis Bay bridge reconstruction at Duluth, Minn. In 1910 Mr. Yager became division engineer at St. Paul, and served in that capacity until 1917, when he was appointed engineer maintenance of way, with the same headquarters. In 1922 he was appointed assistant chief engineer at St. Paul, the position he held at the time of his death. During federal control of the railroads following World War I, Mr. Yager was called to Washington as chief maintenance of way engineer of the U. S. Railroad Administration. In 1943, he returned to Washington to serve for six months in the Transportation Equipment division of the War Production Board. Following this assignment, he spent much time in the capital expediting delivery of equipment and materials urgently needed by the Northern Pacific to handle military traffic.

Table of Revenues and Expenses appears on next left-hand page

The relation of

the FRANKLIN SYSTEM of STEAM DISTRIBUTION

TO TODAY'S RAILROAD PROBLEMS



MANDATORY increases in the cost of fuel, wages, material, and other items which enter into cost make it imperative that railroad operations be studied with a view to securing economies which will keep a proper balance between increased cost of operation and revenues fixed by inadequate freight and passenger rates.

The spread between higher operating cost, over which railroad officers have had no control, and the revenue determined by rates insufficient to compensate for these mandatory increases, have caused a shrinkage in net earnings that may well become serious.

Keen competition from other sources of transportation and the demand from the traveling and shipping public for more and faster trains have created a demand for greater sustained speed in both freight and passenger service.

The Franklin System of Steam Distribution is offered to the railroads with the confident assurance that it will help solve these problems. It is applicable to either new or existing locomotives.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF SEPTEMBER AND NINE MONTHS OF CALENDAR YEAR 1946

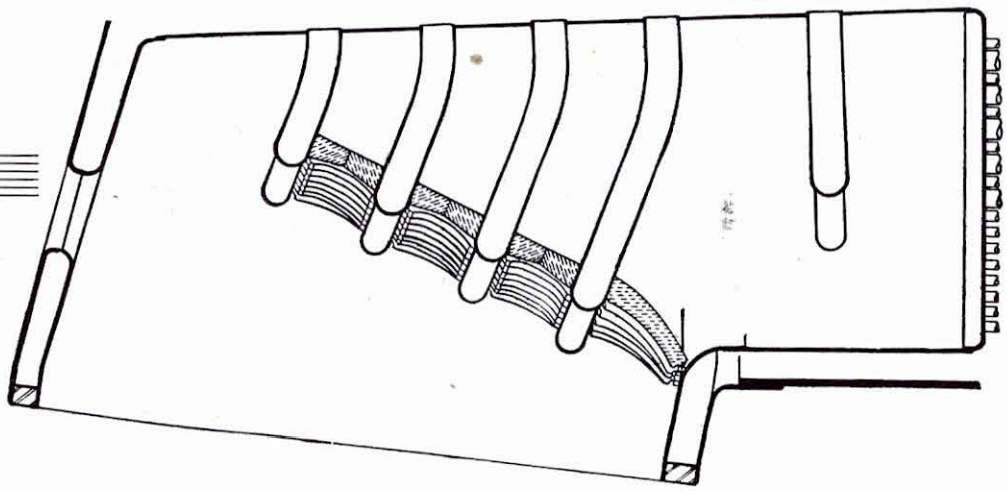
Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income: 1946	1945
Akron, Canton & Youngstown	Sept.	171	$373,867	$185	$303,542	$64,141	$49,311	$23,242	$126,440	$282,347	71.7	$111,195	$31,530	$63,611	—$19,142
	9 mos.	171	2,856,509	1,072	3,016,710	551,901	376,774	210,793	1,082,717	2,402,022	79.6	614,688	211,177	243,552	345,597
Alton	Sept.	959	1,537,703	508,426	2,346,654	556,105	360,247	68,738	959,481	2,088,653	89.0	258,001	157,021	—110,189	—98,382
	9 mos.	959	12,905,872	5,882,651	21,554,908	4,823,385	3,994,637	721,051	9,373,096	20,494,934	95.1	1,059,974	1,587,005	—2,040,067	3,083,138
Atchison, Topeka & Santa Fe System	Sept.	13,084	24,872,051	5,511,458	33,700,799	5,247,656	5,953,741	722,852	12,052,187	25,536,979	75.8	8,163,820	3,729,397	4,518,547	—11,122,991
	9 mos.	13,085	29,289,603	61,013,564	305,420,567	45,961,681	59,412,243	6,617,214	110,157,038	231,317,707	75.7	74,102,860	39,555,246	34,416,289	28,622,136
Atlanta & West Point	Sept.	93	235,090	103,633	373,930	41,357	65,467	12,037	168,218	307,480	82.2	66,450	9,363	32,149	—18,229
	9 mos.	93	1,874,877	805,633	2,992,584	386,941	519,787	110,544	1,501,724	2,703,658	90.3	288,926	—30,879	132,655	225,901
Western of Alabama	Sept.	133	212,753	80,377	321,632	43,562	71,009	11,702	138,393	283,028	88.0	38,604	11,619	25,582	—45,878
	9 mos.	133	1,826,205	812,896	2,885,829	436,284	584,402	106,757	1,259,624	2,555,610	88.6	330,219	101,196	244,816	262,074
Atlantic Coast Line	Sept.	5,571	6,162,005	2,031,574	8,825,216	2,026,646	1,630,684	241,866	3,907,304	8,244,127	93.4	581,089	—200,000	757,107	127,398
	9 mos.	5,569	65,649,579	21,474,065	93,335,535	23,382,668	16,201,838	2,257,486	40,010,263	86,122,114	92.3	7,213,421	4,900,000	—249,421	5,812,732
Charleston & Western Carolina	Sept.	343	270,309	10,385	289,169	73,831	65,528	11,901	127,406	287,452	99.4	1,717	15,000	—12,920	—18,780
	9 mos.	343	2,632,645	80,479	2,787,176	672,080	616,058	111,544	1,218,467	2,691,058	96.6	96,118	185,000	—112,245	271,030
Baltimore & Ohio	Sept.	6,139	23,689,901	2,482,493	27,637,164	4,058,382	6,310,514	627,136	11,412,550	23,574,361	85.3	4,062,803	1,603,198	2,013,419	2,683,190
	9 mos.	6,139	183,103,343	28,608,900	224,288,952	33,554,110	54,113,807	5,530,980	99,755,893	204,090,094	91.0	20,198,858	14,554,621	2,153,107	33,154,208
Staten Island Rapid Transit	Sept.	29	200,904	108,250	321,538	42,447	34,032	1,416	144,520	244,574	76.1	76,964	37,541	13,456	33,375
	9 mos.	29	1,455,918	1,049,146	2,607,819	448,087	326,109	13,720	1,393,843	2,394,225	91.8	213,594	327,273	—293,415	728,418
Bangor & Aroostook	Sept.	602	399,461	61,877	485,638	183,495	206,304	7,551	212,092	647,185	133.3	—161,547	—20,151	—99,344	101,064
	9 mos.	602	7,000,685	513,887	7,737,513	2,033,033	1,834,702	66,077	2,526,609	6,805,168	88.0	932,345	580,691	422,132	886,308
Bessemer & Lake Erie	Sept.	214	2,121,582	2,788	2,148,094	154,173	430,104	15,136	445,334	1,089,514	50.7	1,058,580	518,049	771,164	417,116
	9 mos.	214	11,155,010	16,554	11,306,783	1,291,086	3,689,979	139,186	3,060,199	8,592,057	76.0	2,714,726	1,869,089	2,975,096	2,850,078
Boston & Maine	Sept.	1,762	4,474,551	1,348,327	6,366,572	1,012,000	1,028,581	102,380	2,791,497	5,199,559	81.7	1,167,013	498,085	401,491	408,416
	9 mos.	1,763	38,955,474	13,024,089	56,912,867	9,675,446	9,559,965	886,634	25,389,780	48,002,657	84.3	8,910,210	4,242,382	2,127,133	5,982,889
Burlington-Rock Island	Sept.	228	148,088	75,958	247,315	42,381	35,345	4,206	124,987	223,312	90.3	24,003	10,147	—32,479	26,715
	9 mos.	228	1,703,870	625,219	2,506,631	392,632	293,278	36,166	1,015,200	1,893,455	75.5	613,176	88,659	126,923	423,540
Cambria & Indiana	Sept.	35	138,494	.....	138,562	11,741	45,728	617	20,823	85,675	61.83	52,887	61,086	72,882	47,715
	9 mos.	35	1,010,892	.....	1,011,476	113,829	432,093	5,994	165,577	784,539	77.56	226,937	433,892	495,437	444,818
Canadian Pacific Lines in Maine	Sept.	234	179,493	61,670	271,342	132,982	48,380	8,848	118,400	319,230	117.6	—47,888	21,397	—114,050	—29,335
	9 mos.	234	2,925,054	589,857	3,799,479	764,423	591,165	77,879	1,526,689	3,066,539	80.7	732,940	201,384	—88,254	922,627
Canadian Pacific Lines in Vermont	Sept.	90	120,687	34,745	182,778	29,896	26,866	3,194	161,291	226,945	124.2	—44,167	11,305	—94,958	—77,935
	9 mos.	90	903,720	176,211	1,253,068	374,490	276,434	28,215	1,091,857	1,820,989	145.3	—567,921	99,215	—1,024,296	—918,385
Central of Georgia	Sept.	1,815	1,885,067	345,840	2,429,640	407,810	429,648	96,633	1,298,591	2,388,802	98.3	40,838	—88,970	150,906	107,993
	9 mos.	1,815	17,785,710	3,699,783	23,659,039	3,955,218	4,138,750	835,672	11,814,634	22,146,014	93.6	1,513,025	1,233,782	448,413	3,791,345
Central of New Jersey	Sept.	419	2,185,080	542,303	2,914,629	392,639	527,488	47,053	1,463,509	2,577,969	88.4	336,660	398,286	—300,350	309,805
	9 mos.	598	26,190,537	5,029,674	33,250,460	4,277,747	6,513,261	553,689	17,010,039	29,977,322	90.2	3,273,138	3,577,075	—1,740,825	4,523,376
Central R. R. Co. of Pennsylvania	Sept.	230	1,313,120	20,605	1,349,831	135,394	258,787	16,940	446,329	889,181	65.9	460,650	45,893	573,744	28,128
	9 mos.	51	2,361,605	38,620	2,426,934	266,045	527,359	37,309	835,437	1,726,323	71.1	700,611	99,930	1,205,188	234,884
Central Vermont	Sept.	422	564,889	118,000	740,734	112,045	103,305	11,569	384,028	643,295	86.8	97,439	42,063	—9,575	37,652
	9 mos.	422	4,724,340	801,000	5,995,117	1,006,123	1,032,129	97,982	3,181,471	5,618,150	93.7	376,967	397,485	—496,462	77,424
Chesapeake & Ohio	Sept.	3,102	17,230,220	922,016	18,923,213	2,339,204	3,123,564	287,158	6,158,273	12,533,560	66.2	6,389,653	2,619,019	4,145,515	2,422,291
	9 mos.	3,092	126,966,070	11,227,637	143,693,728	19,588,567	26,388,184	2,738,496	48,305,924	102,682,158	71.5	41,011,570	20,297,773	24,489,240	23,730,121
Chicago & Eastern Illinois	Sept.	910	1,628,117	337,711	2,137,102	356,620	494,563	77,174	956,629	1,996,211	93.4	140,891	136,000	—109,423	158,602
	9 mos.	910	12,875,654	3,527,520	18,144,391	3,025,988	4,002,773	698,733	8,433,977	17,200,096	94.8	944,295	1,226,000	—1,411,434	2,122,079
Chicago & Illinois Midland	Sept.	131	571,182	976	609,742	72,377	140 419	21,776	172,650	434,042	71.2	175,700	78,361	92,936	73,721
	9 mos.	131	4,181,956	8,259	4,414,064	487,197	1,009 791	221,216	1,431,600	3,406,183	77.2	1,007,881	480,594	514,708	703,118
Chicago & North Western	Sept.	8,065	10,223,208	2,634,952	14,351,777	2,014,420	2,405,918	261,326	6,028,579	11,351,296	79.1	3,000,481	449,335	1,985,116	2,031,772
	9 mos.	8,065	79,102,724	26,372,183	118,413,529	19,029,813	23,020,484	2,351,544	52,322,738	102,360,102	86.4	16,053,427	7,665,715	5,703,105	17,151,349
Chicago, Burlington & Quincy	Sept.	8,868	12,649,541	2,104,978	16,341,213	2,954,228	2,294,151	311,132	5,709,391	11,891,433	72.8	4,449,780	1,745,302	2,320,556	1,671,628
	9 mos.	8,865	109,261,675	22,531,585	146,219,289	23,662,931	20,241,895	3,023,458	50,756,735	103,365,185	70.7	42,854,104	19,265,834	20,497,279	24,140,209
Chicago Great Western	Sept.	1,500	1,788,643	104,160	2,084,523	355,095	301,839	72,672	975,955	1,784,262	85.6	300,261	*4,676	126,900	108,328
	9 mos.	1,500	16,099,077	1,604,534	19,581,946	3,575,392	3,022,000	648,391	9,472,643	17,439,765	89.1	2,142,181	720,572	—220,566	1,991,487
Chicago, Indianapolis & Louisville	Sept.	541	979,872	43,100	1,083,669	175,639	188,534	42,340	458,400	922,064	85.1	161,605	66,224	13,988	54,000
	9 mos.	541	7,132,736	407,222	7,978,039	1,291,030	1,623,704	340,277	3,526,707	7,264,306	91.1	713,733	559,499	—502,241	1,511,853

Table continued on next left-hand page.

Faster Evaporation

Located right in the path of the hot gases, Security Circulators are very effective elements for speeding evaporation. There is a continuous circulation of water from the side water-legs, through the circulators, over the top of the crown sheet.

At the same time the Security Circulators provide the most satisfactory type of support for a 100% brick arch.



Typical Installation in Coal-Fired Locomotive

AMERICAN ARCH COMPANY, INC.

NEW YORK • CHICAGO

SECURITY CIRCULATOR DIVISION

REVENUES AND EXPENSES OF RAILWAYS

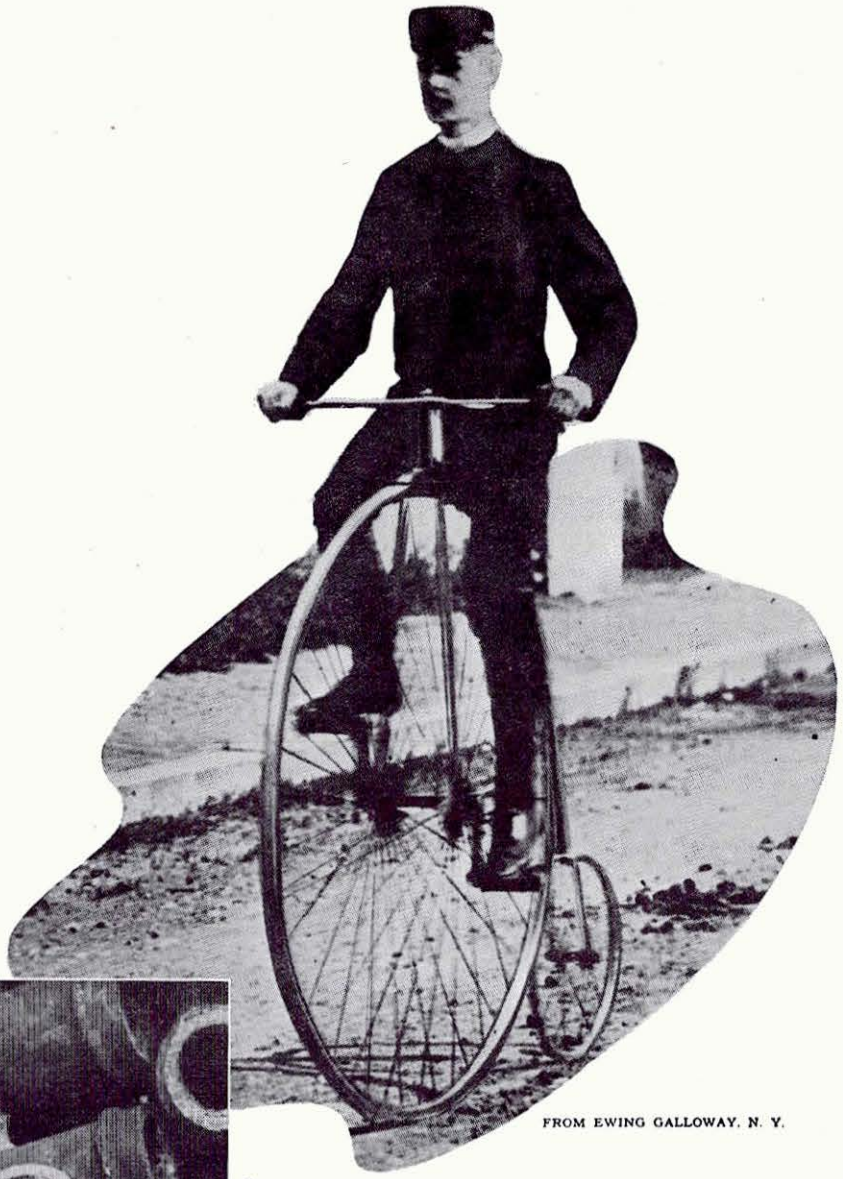
MONTH OF SEPTEMBER AND NINE MONTHS OF CALENDAR YEAR 1946—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income 1946	Net railway operating income 1945
Chicago, Milwaukee, St. Paul & Pacific	Sept.	10,733	$13,659,771	$2,095,627	$17,555,830	$2,784,125	$2,659,681	$352,026	$7,351,730	$13,989,937	79.7	$3,565,893	$1,284,000	$1,841,472	$1,977,342
	9 mos.	10,733	108,500,007	22,452,044	146,276,985	25,974,594	27,585,672	3,020,052	65,721,461	129,833,579	88.8	16,443,496	6,144,000	6,629,401	21,503,234
Chicago, Rock Island & Pacific	Sept.	7,651	9,433,184	2,209,913	12,654,881	2,157,249	2,068,790	381,890	4,928,112	10,173,507	80.4	2,481,374	767,794	1,108,209	1,191,853
	9 mos.	7,652	86,199,255	23,419,755	119,130,710	16,986,286	19,617,419	3,525,110	45,740,308	91,873,563	77.1	27,257,147	9,065,165	12,157,764	20,677,113
Chicago, St. Paul, Minn. & Omaha	Sept.	1,616	1,983,318	367,431	2,547,861	288,574	302,630	46,847	1,123,197	1,855,010	72.8	692,851	157,299	462,617	430,347
	9 mos.	1,616	15,193,152	2,670,682	19,849,901	3,157,576	3,347,235	429,156	10,115,536	17,928,775	90.3	1,921,126	1,442,288	—630,167	2,923,402
Clinchfield	Sept.	302	1,176,096	8,016	1,193,406	95,735	200,817	27,759	332,620	678,364	56.8	515,042	123,160	485,294	250,930
	9 mos.	302	9,530,047	77,375	9,703,234	957,552	1,641,625	235,521	2,738,737	5,791,953	59.7	3,911,281	1,209,831	3,111,626	4,044,564
Colorado & Southern	Sept.	748	715,988	169,086	983,558	191,717	193,279	21,797	449,187	900,728	91.6	82,830	67,584	—44,138	249,724
	9 mos.	748	5,690,160	1,532,667	8,046,155	1,493,089	1,468,882	187,805	3,482,680	7,074,447	87.9	971,708	635,857	188,391	1,810,778
Ft. Worth & Denver City	Sept.	902	664,434	194,135	945,783	196,528	165,318	30,430	386,095	840,289	88.8	105,494	50,488	1,795	181,784
	9 mos.	902	5,914,430	2,112,439	8,873,245	1,908,757	1,467,033	287,342	3,288,450	7,530,699	84.9	1,342,546	503,203	559,970	1,755,539
Colorado & Wyoming	Sept.	42	87,300	.....	134,885	9,536	14,467	851	52,725	83,612	61.9	51,273	30,370	21,043	22,269
	9 mos.	42	592,333	.....	967,898	82,160	131,138	7,104	395,704	669,317	69.1	298,581	97,896	189,826	177,111
Columbus & Greenville	Sept.	168	128,078	4,762	141,579	23,602	23,025	4,494	59,282	123,339	87.1	18,240	27,937	—10,516	—13,172
	9 mos.	168	1,128,111	51,516	1,256,751	260,348	190,287	44,345	470,845	1,098,026	87.4	158,725	119,010	35,809	24,776
Delaware & Hudson	Sept.	846	3,762,626	258,664	4,124,553	544,429	847,726	56,451	1,611,367	3,198,160	77.5	926,393	236,437	666,714	408,612
	9 mos.	846	29,694,515	1,570,439	32,136,182	4,854,152	7,314,990	504,264	13,633,897	27,551,870	85.7	4,584,312	2,064,270	2,622,639	3,743,933
Delaware, Lackawanna & Western	Sept.	973	4,174,774	832,717	5,584,978	811,460	942,592	125,620	2,616,607	4,691,746	84.0	893,232	510,560	256,294	280,137
	9 mos.	973	37,848,570	7,898,434	50,373,196	6,666,931	8,867,929	1,122,384	25,141,796	43,645,105	86.6	6,728,091	3,682,341	2,580,269	3,723,717
Denver & Rio Grande Western	Sept.	2,386	4,000,258	406,632	4,640,888	580,921	1,017,932	122,472	1,825,167	3,759,868	81.0	881,020	339,897	508,499	—10,853,891
	9 mos.	2,386	29,389,412	6,399,372	37,789,383	5,151,540	8,886,900	1,056,558	15,287,353	32,340,544	85.6	5,448,839	2,824,607	2,490,941	—2,165,241
Denver & Salt Lake	Sept.	232	385,958	7,218	405,528	64,074	59,523	3,417	132,806	272,689	67.2	132,839	32,621	138,222	93,244
	9 mos.	232	2,333,118	67,613	2,506,047	513,319	507,287	35,114	948,834	2,134,120	84.8	381,927	291,781	487,340	666,114
Detroit & Mackinac	Sept.	230	110,264	2,368	119,523	19,128	18,312	639	38,745	82,726	69.2	36,797	4,686	10,923	776
	9 mos.	230	883,952	32,803	975,169	192,167	129,730	6,890	344,893	720,868	73.9	254,301	44,450	124,629	29,324
Detroit & Toledo Shore Line	Sept.	50	371,868	.....	373,924	49,418	34,043	11,022	114,810	218,831	58.5	155,093	47,505	48,809	6,823
	9 mos.	50	3,059,314	.....	3,076,101	341,308	274,870	95,863	1,052,615	1,848,957	60.1	1,227,144	367,951	320,463	438,646
Detroit, Toledo & Ironton	Sept.	464	901,713	1,052	942,675	103,261	145,102	18,043	258,990	553,741	58.7	388,934	114,572	225,986	14,139
	9 mos.	464	6,810,297	10,394	7,162,482	937,711	1,389,047	157,128	2,187,695	4,924,221	68.8	2,238,261	690,324	1,219,161	1,262,947
Duluth, Missabe & Iron Range	Sept.	547	4,478,465	4,934	5,192,846	334,530	386,943	5,725	1,084,893	1,856,933	35.8	3,335,913	1,467,717	1,887,686	1,834,578
	9 mos.	546	21,533,309	38,020	25,089,784	3,557,423	3,418,964	54,349	6,328,220	13,795,089	55.0	11,294,695	5,123,577	6,203,664	9,253,192
Duluth, Winnipeg & Pacific	Sept.	175	207,000	1,700	214,400	70,086	36,695	3,105	107,122	221,373		—6,973	—25,809	—57,210	—23,169
	9 mos.	175	1,855,000	18,500	1,917,800	501,444	315,230	25,315	895,729	1,779,569		138,231	162,613	—263,280	7,738
Elgin, Joliet & Eastern	Sept.	391	1,986,595	4	2,469,920	145,398	449,207	19,739	1,067,803	1,751,984	70.9	717,936	430,255	180,258	—17,087
	9 mos.	391	15,436,678	212	18,811,205	2,225,280	3,782,085	181,647	8,726,230	15,612,078	83.0	3,199,127	1,707,308	534,903	2,252,044
Erie	Sept.	2,242	9,921,784	596,038	11,227,239	1,230,652	2,052,855	249,603	4,982,194	9,058,209	80.7	2,169,030	5,729	1,483,121	829,155
	9 mos.	2,242	79,303,486	7,232,405	92,527,230	10,575,467	18,324,648	2,278,645	45,370,964	81,538,856	88.1	10,988,374	4,339,068	1,440,461	11,867,873
Florida East Coast	Sept.	682	997,284	486,529	1,629,898	318,941	375,232	53,098	649,712	1,530,485	93.9	99,413	300,998	—269,848	194,140
	9 mos.	682	11,974,004	5,943,147	19,506,998	2,938,863	3,280,591	512,392	7,379,762	15,364,646	78.8	4,142,352	1,365,463	1,897,044	3,804,752
Georgia Railroad	Sept.	328	531,520	80,792	650,362	78,718	134,028	25,024	326,518	590,175	90.8	60,187	37,306	34,237	139,872
	9 mos.	328	4,685,997	780,566	5,813,620	833,854	1,186,414	228,906	2,975,376	5,447,923	93.7	365,697	340,146	82,970	1,622,862
Georgia & Florida	Sept.	408	160,038	3,278	173,110	63,024	29,760	12,019	77,480	190,598	110.1	—17,488	12,516	—38,628	—11,103
	9 mos.	408	1,724,411	29,472	1,804,588	495,968	248,916	106,409	728,281	1,651,101	91.5	153,487	110,261	—72,795	8,667
Grand Trunk Western	Sept.	972	2,594,000	160,000	2,947,000	1,015,972	637,999	48,535	1,496,599	3,315,150	112.5	—368,150	197,384	—763,199	291,298
	9 mos.	996	20,955,000	2,141,000	24,786,000	5,240,513	5,194,470	412,596	13,084,583	25,035,726	101.0	—249,726	1,326,774	—2,545,235	3,495,328
Canadian Nat'l Lines in New England	Sept.	172	140,000	12,900	161,500	69,540	31,533	2,369	98,271	219,398	135.9	—57,898	24,814	—115,047	—68,748
	9 mos.	172	1,282,100	113,300	1,586,500	520,609	337,377	20,545	968,598	1,979,591	124.8	—393,091	204,738	—924,344	—615,963
Great Northern	Sept.	8,332	13,911,851	1,134,646	16,385,488	2,258,565	2,630,901	292,085	5,920,369	11,635,958	71.0	4,749,530	794,147	3,650,526	3,655,657
	9 mos.	8,332	96,547,299	12,741,266	119,704,658	22,265,938	22,399,023	2,553,919	44,505,170	96,405,007	80.5	23,299,651	9,747,130	12,740,956	25,080,108
Green Bay & Western	Sept.	234	242,659	403	248,427	30,274	25,249	10,810	82,947	159,559	64.2	88,868	19,581	57,046	747
	9 mos.	234	1,929,187	4,080	1,981,562	444,323	215,718	101,932	766,407	1,628,568	82.1	352,994	212,726	55,919	64,436

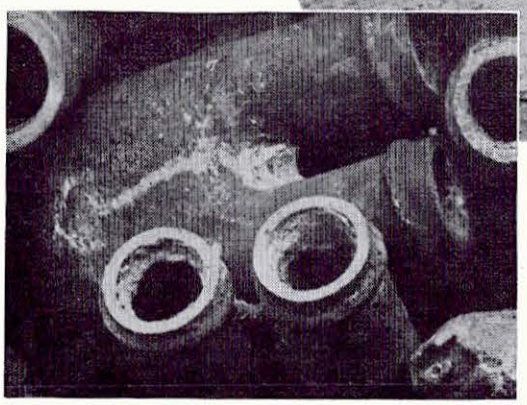
* Credit.

Table continued on next left-hand page.

Yesterday's Designs



FROM EWING GALLOWAY, N. Y.



Years ago this company pioneered the cast steel return bend in its design of locomotive superheater units.

Performance of cast steel welded return bends was never satisfactory and conditions demanded an improvement. This was accomplished with our development of machine-die-forging the ends of the tubing into return bends. It has been adopted as standard by the railroads of the world.

THE SUPERHEATER COMPANY

Representative of AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street, NEW YORK
122 S. Michigan Ave., CHICAGO
Montreal, Canada, THE SUPERHEATER COMPANY, LTD.

A-1829CA — 1357 & 2833

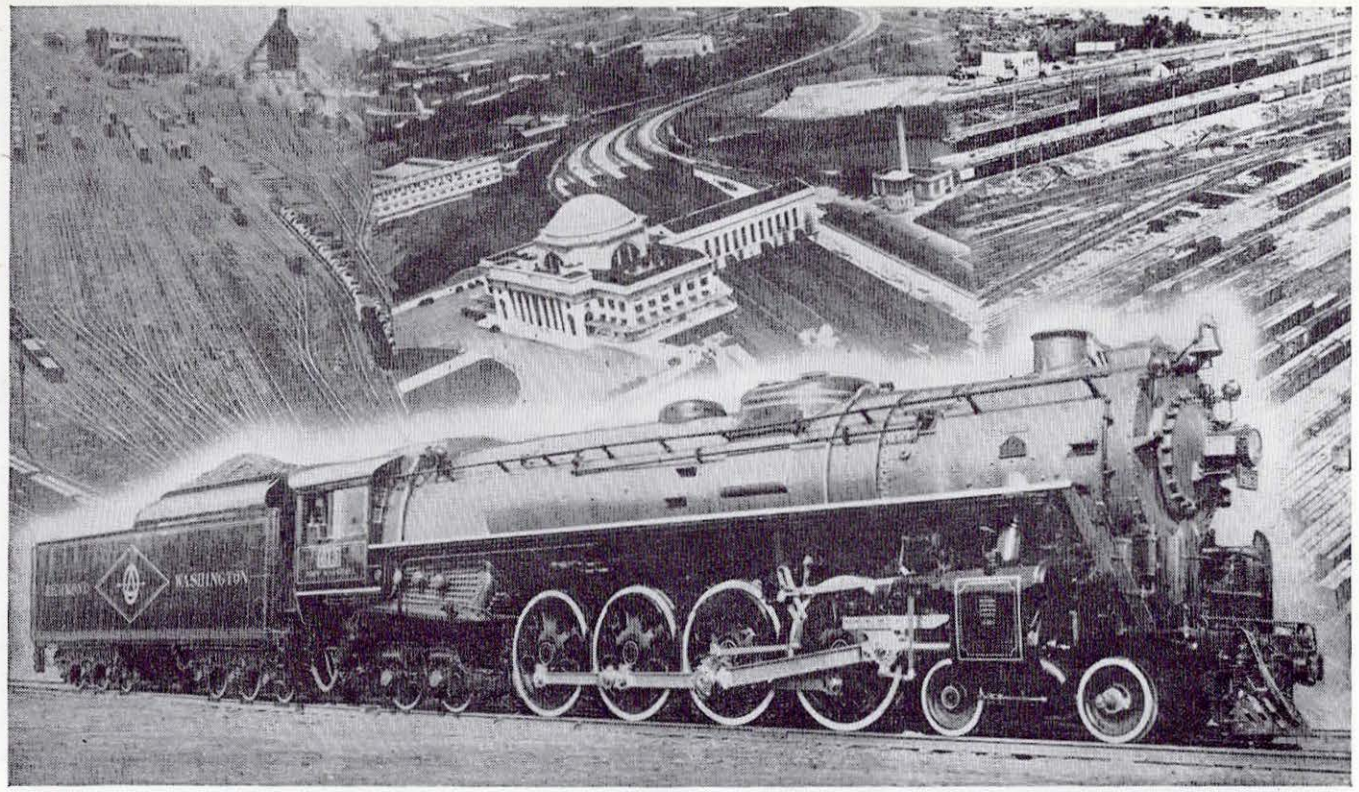
Superheaters • Superheater Pyrometers • Exhaust Steam Injectors • Steam Dryers • Feedwater Heaters • American Throttles

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF SEPTEMBER AND NINE MONTHS OF CALENDAR YEAR 1946—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income 1946	Net railway operating income 1945
Gulf, Mobile & Ohio	Sept.	1,945	$2,597,956	$132,711	$2,832,777	$563,135	$517,766	$107,449	$976,783	$2,301,063	81.2	$531,714	$232,670	$146,415	$237,495
	9 mos.	1,945	23,564,127	1,428,430	25,876,377	5,129,629	4,860,789	936,750	9,321,536	21,559,155	83.3	4,317,222	1,864,412	1,022,686	3,076,660
Illinois Central R. R. Co. (System)	Sept.	6,582	14,070,057	2,279,170	17,506,206	3,177,235	2,988,812	343,235	6,461,470	13,808,746	78.9	3,697,460	1,906,231	1,543,542	1,448,414
	9 mos.	6,597	119,122,681	23,870,342	153,376,262	27,606,304	26,671,110	2,916,431	59,390,722	124,645,512	81.3	28,730,750	15,262,842	11,601,712	21,857,405
Illinois Terminal	Sept.	476	632,195	136,295	860,997	115,300	113,047	23,989	313,902	596,808	69.32	264,189	110,088	123,852	86,391
	9 mos.	476	4,907,560	1,299,863	6,902,935	1,047,552	988,186	214,175	2,787,817	5,320,965	77.08	1,581,968	732,803	629,678	1,020,914
Kansas City Southern	Sept.	890	2,293,964	157,137	2,654,862	288,007	315,192	66,964	895,167	1,671,352	63.0	983,510	333,000	487,205	545,431
	9 mos.	890	18,619,885	2,034,665	22,375,806	2,312,560	3,044,679	620,986	7,678,556	14,692,774	65.7	7,683,032	2,557,000	3,904,291	4,605,046
Kansas, Oklahoma & Gulf	Sept.	328	305,250	1,372	309,440	64,259	18,121	13,328	87,058	196,843	63.6	112,597	35,735	52,412	36,102
	9 mos.	328	2,728,170	13,981	2,770,844	413,226	215,044	117,772	782,135	1,652,881	59.7	1,117,963	383,850	502,668	750,904
Lake Superior & Ishpeming	Sept.	156	251,945	89	313,923	45,298	34,941	1,124	73,398	162,871	51.9	151,052	75,823	82,887	135,605
	9 mos.	156	1,323,697	814	1,609,412	373,724	349,092	7,610	456,126	1,261,768	78.4	347,644	291,997	107,790	602,547
Lehigh & Hudson River	Sept.	96	245,165	.....	245,474	41,774	36,207	6,161	86,825	177,819	72.4	67,655	28,616	21,409	15,469
	9 mos.	96	1,988,633	.....	1,993,146	361,765	302,113	55,933	696,067	1,481,544	74.3	511,602	215,548	153,309	207,750
Lehigh & New England	Sept.	189	608,435	.....	617,873	70,982	87,368	9,456	192,967	383,671	62.1	234,202	102,197	129,323	93,450
	9 mos.	190	4,843,707	.....	4,893,789	586,816	868,869	89,205	1,719,333	3,466,979	70.8	1,426,810	690,675	845,138	651,796
Lehigh Valley	Sept.	1,254	5,073,974	394,086	5,824,226	852,113	970,042	123,365	2,483,665	4,654,456	79.9	1,169,770	393,060	660,920	590,315
	9 mos.	1,254	40,894,498	4,916,704	49,280,921	6,725,668	7,207,904	1,151,773	23,508,214	40,647,626	82.5	8,633,295	3,758,737	3,422,922	3,796,777
Louisiana & Arkansas	Sept.	756	1,075,975	76,066	1,195,067	141,994	144,373	36,063	355,577	720,093	60.3	474,974	193,679	212,460	181,339
	9 mos.	756	8,680,468	846,722	9,905,877	1,274,801	1,323,566	328,824	3,279,662	6,607,228	66.7	3,298,649	1,174,975	1,524,247	2,027,439
Louisville & Nashville	Sept.	4,759	11,783,161	1,756,454	14,325,815	1,982,119	2,837,712	244,995	6,017,710	11,624,085	81.1	2,701,730	1,729,775	1,571,113	1,396,397
	9 mos.	4,759	98,565,102	19,176,549	125,426,419	17,836,943	26,629,617	2,294,958	52,873,271	104,707,439	83.5	20,718,980	13,362,808	11,021,793	18,331,480
Maine Central	Sept.	988	1,332,362	217,259	1,643,284	231,487	310,335	15,975	691,199	1,307,061	79.5	336,223	146,120	155,484	77,050
	9 mos.	988	12,416,391	2,116,030	15,424,975	2,679,475	2,818,839	144,148	6,573,296	12,733,285	82.6	2,691,690	1,128,218	971,659	1,328,529
Midland Valley	Sept.	334	156,345	17	159,198	45,063	20,959	2,651	48,558	123,254	77.4	35,944	11,865	17,546	19,619
	9 mos.	334	1,203,127	202	1,224,367	290,733	146,226	26,694	446,163	965,051	78.8	259,316	104,936	81,869	215,048
Minneapolis & St. Louis	Sept.	1,408	1,265,519	17,843	1,333,940	200,313	199,859	90,440	454,362	1,014,023	76.0	319,917	174,316	130,976	250,672
	9 mos.	1,408	9,673,360	273,407	10,406,524	2,403,998	1,819,331	780,842	4,122,525	9,783,188	94.0	623,336	571,998	—113,063	1,282,469
Minneapolis, St. Paul & S. S. Marie	Sept.	3,224	2,589,529	182,220	2,947,418	583,499	385,376	48,202	1,186,372	2,287,295	77.6	660,123	182,842	380,017	62,964
	9 mos.	3,224	16,944,346	1,363,032	19,780,074	4,350,323	3,597,180	424,260	9,371,523	18,522,575	93.6	1,257,499	1,544,110	—353,533	1,720,068
Duluth, South Shore & Atlantic	Sept.	530	306,223	19,187	347,562	92,274	63,533	13,567	146,104	324,178	93.3	23,384	20,445	626	48,417
	9 mos.	530	2,688,923	137,858	3,043,995	676,013	583,500	121,199	1,374,667	2,841,044	93.3	202,951	189,293	—68,467	449,529
Spokane International	Sept.	152	138,069	2,472	149,720	22,929	15,349	3,404	50,755	98,836	66.0	50,884	16,178	22,786	13,661
	9 mos.	152	1,056,727	24,624	1,152,366	257,556	145,270	28,624	409,831	903,163	78.4	249,203	66,356	107,499	196,638
Mississippi Central	Sept.	148	118,623	—311	121,665	19,266	14,214	9,546	30,459	79,864	65.6	41,801	6,654	24,921	13,278
	9 mos.	155	957,108	33,654	1,018,074	228,042	133,331	84,438	290,413	799,030	78.5	219,044	61,341	59,487	203,965
Missouri & Arkansas	Sept.	365	52,151	619	55,224	13,799	11,735	4,790	20,760	56,694	102.7	—1,470	2,977	—13,581	—39,633
	9 mos.	365	1,165,370	17,479	1,262,203	343,276	194,019	64,810	530,602	1,188,737	94.2	73,466	54,576	—121,949	—310,123
Missouri-Illinois	Sept.	172	329,204	405	332,804	51,729	32,621	5,260	97,259	194,481	58.4	138,323	57,025	66,535	34,193
	9 mos.	172	2,537,419	3,938	2,562,455	421,614	309,113	43,844	755,747	1,597,413	62.3	965,042	428,889	456,394	325,740
Missouri-Kansas-Texas Lines	Sept.	3,253	3,875,077	548,519	4,852,761	940,103	712,066	178,867	1,984,040	4,070,290	83.9	782,471	314,751	243,860	471,608
	9 mos.	3,253	35,445,558	6,056,248	45,553,778	7,817,268	6,691,086	1,745,560	18,012,310	36,651,386	80.5	8,902,392	3,746,449	3,264,960	5,524,075
Missouri Pacific	Sept.	7,080	11,729,439	1,929,250	14,941,648	2,187,627	2,524,990	335,680	5,723,081	11,367,635	76.1	3,574,013	842,810	2,144,487	2,337,275
	9 mos.	7,080	100,498,165	16,528,364	128,029,238	19,395,706	23,091,317	3,110,631	51,004,968	102,018,318	79.7	26,010,920	7,659,984	12,949,609	23,764,070
Gulf Coast Lines	Sept.	1,734	2,207,601	155,625	2,482,973	552,883	358,184	65,503	930,951	2,006,732	80.82	476,241	111,074	216,507	225,848
	9 mos.	1,734	25,765,226	1,737,113	28,719,724	5,184,043	3,198,705	586,908	9,226,821	19,070,748	66.40	9,648,976	2,294,427	5,029,348	4,149,332
International-Great Northern	Sept.	1,110	1,536,619	303,810	2,090,683	435,282	344,907	44,195	942,698	1,884,587	90.1	206,096	102,173	—18,398	252,382
	9 mos.	1,110	14,849,172	2,925,744	19,933,126	4,166,850	3,180,428	380,178	8,503,359	17,228,921	86.4	2,704,205	945,075	256,105	2,571,715
Monongahela	Sept.	170	595,097	1,595	599,361	76,117	55,126	856	162,407	299,203	49.9	300,158	54,294	148,153	84,842
	9 mos.	170	4,286,553	18,859	4,332,594	593,366	451,665	7,913	1,335,514	2,427,316	56.0	1,905,278	476,074	694,265	837,757

Table continued on next left-hand page.



It's HSGI, *of course* on the

RICHMOND, FREDERICKSBURG & POTOMAC

For a compact example of big time railroading look at R F & P. Only 114 miles long, it is a road of major importance because most north and south East Coast traffic shuttles over its well-kept double track. At wartime peak, R F & P averaged a train every fourteen minutes between Richmond and Washington.

Like any efficiently run railroad, R F & P naturally tries to get the most use of its motive power with minimum maintenance, so for more than a generation it has used Hunt-Spiller Gun Iron for vital locomotive parts. While this is convincing testimony to HSGI quality, it is not unique, for most Class I roads—76 of them— have used Hunt-Spiller Gun Iron for an equal period.

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HUNT-SPILLER MFG. CORPORATION

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Cylinder Bushings	Crosshead Shoes	Dunbar Sectional Type Packing
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Valve Bushings	Floating Rod Bushings	(Duplex Springs for Above
Valve Packing Rings	Light Weight Valves	Sectional Packing)
Valve Bull Rings	Cylinder Liners and Pistons	Cylinder Snap Rings
	for Diesel Service	Valve Rings, All Shapes

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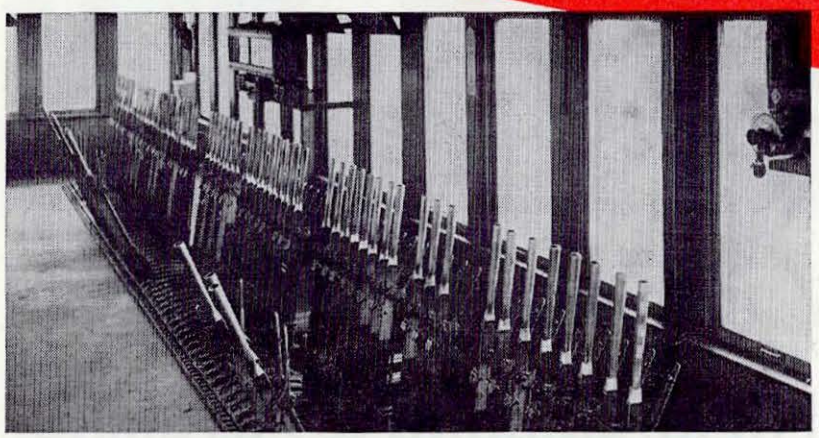
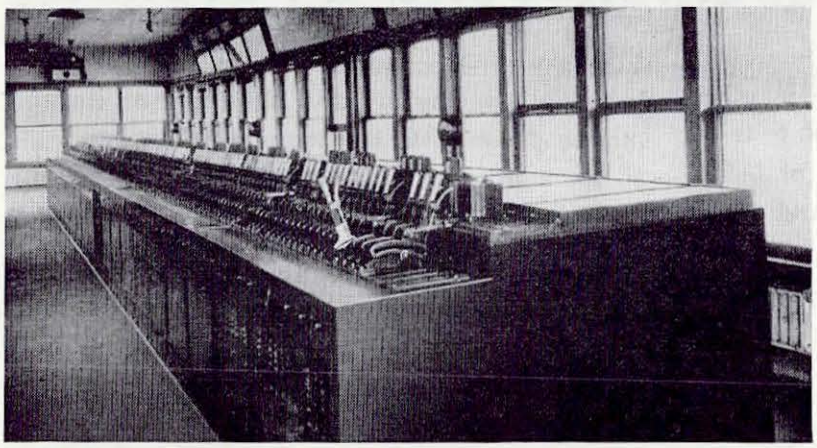
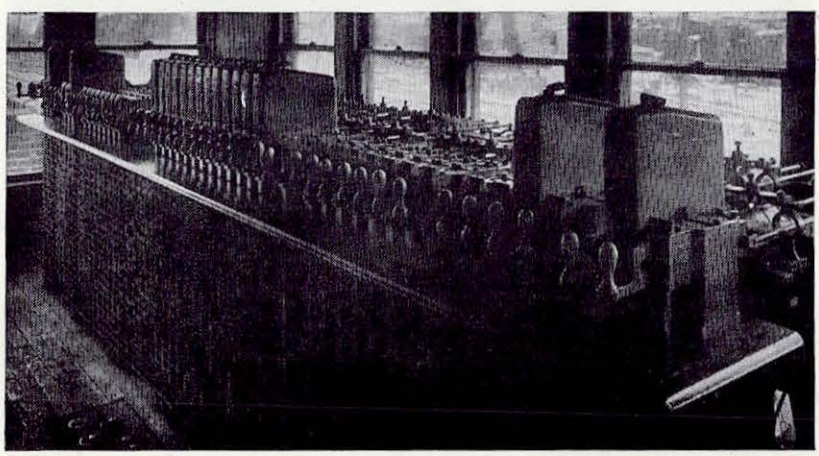


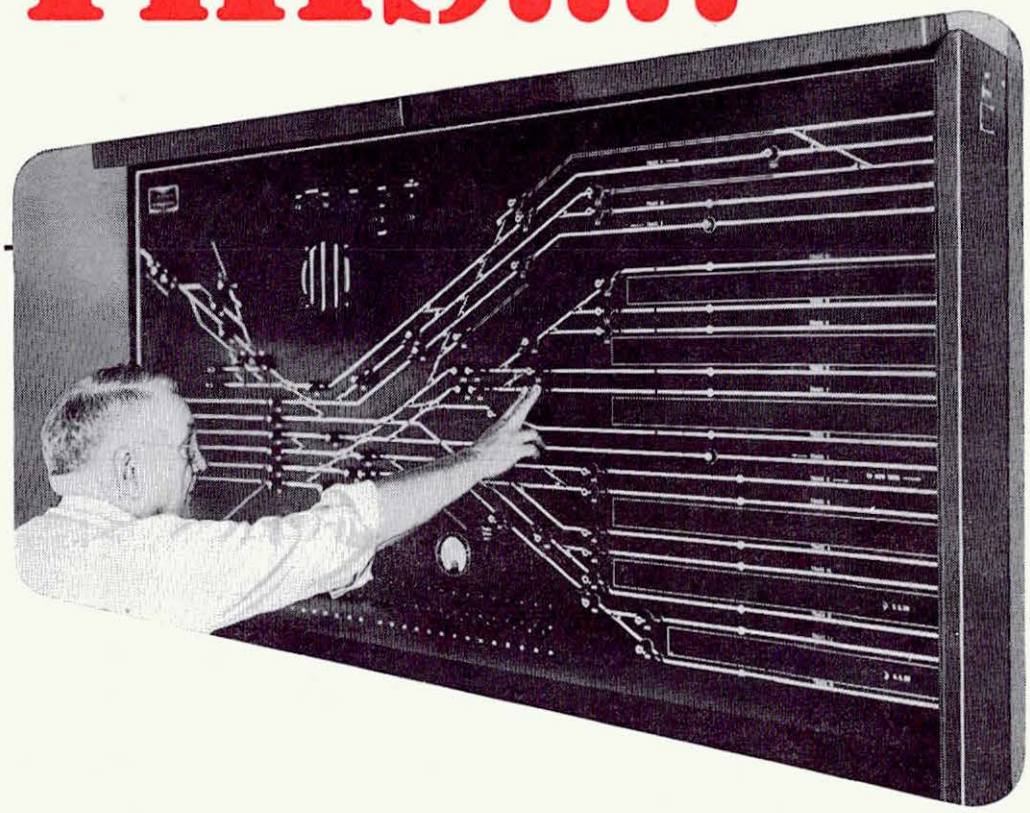




NX ELECTRIC INTERLOCKING

is the choice of many roads when consolidating two or more interlockings into one central plant

OR THIS...?



BECAUSE: NX makes it possible for a single operator to control a complex layout comprising many routes.

NX always ensures that the operator automatically gets the best available route.

NX sharply reduces the chances of errors that cause train delays and confusion.

NX frees the operator's mind from details, permitting him to concentrate on *plans*—helps him to keep trains moving through faster than ever before.

HOW NX WORKS: To set up a route the operator just makes two finger-tip moves. He merely manipulates one eNtrance knob and one eXit button. Breaking the route down into a series of complex lever moves is a thing of the past. Once he has manipulated the buttons, NX swings into action — *automatically* throws switches, clears signals and shows the train's progress by lights on the control board. If the best route is not available, NX *automatically* selects and lines up the next best route.

G-R-S engineers will gladly help you determine what NX can do for you. Call them at our nearest district office. Of course, there's no obligation.

General Railway Signal Company

A-2176

ROCHESTER 2, N. Y. • NEW YORK 17 • CHICAGO 3 • ST. LOUIS 1

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF SEPTEMBER AND NINE MONTHS OF CALENDAR YEAR 1946—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income 1946	1945
Montour	Sept.	51	$286,440	.....	$287,940	$25,661	$61,258	$1,114	$98,820	$196,093	68.1	$91,847	$61,512	$69,074	$64,084
	9 mos.	51	1,909,621	.....	1,920,295	209,551	580,709	11,901	704,423	1,583,638	82.5	336,657	312,560	325,601	538,896
Nashville, Chattanooga & St. Louis	Sept.	1,053	1,802,694	$312,460	2,315,726	491,917	471,823	97,860	1,053,871	2,213,324	95.6	102,402	190,623	—103,063	105,975
	9 mos.	1,053	16,721,443	3,082,921	21,701,729	4,492,858	4,645,565	864,835	9,809,688	20,671,012	95.3	1,030,717	1,559,428	—579,908	2,879,781
New York Central	Sept.	10,746	35,931,254	11,113,105	51,842,727	8,815,304	11,178,568	858,204	24,088,501	47,534,244	91.7	4,308,483	2,186,136	635,263	4,125,261
	9 mos.	10,746	297,493,899	113,267,084	454,169,629	66,079,498	94,665,858	7,859,852	211,723,867	403,951,725	88.9	50,217,904	24,202,239	12,800,558	42,059,184
Pittsburgh & Lake Erie	Sept.	229	2,757,609	88,642	2,958,114	368,235	890,545	54,288	1,076,048	2,520,209	85.2	437,905	546,907	398,699	327,854
	9 mos.	229	18,421,013	870,809	20,099,940	3,134,721	7,331,716	481,358	9,006,778	21,133,556	105.1	—1,033,616	1,879,084	2,304,622	3,578,892
New York, Chicago & St. Louis	Sept.	1,687	6,009,631	143,156	6,330,888	826,535	1,109,755	179,530	2,442,718	4,794,479	75.7	1,536,409	258,434	997,631	1,038,402
	9 mos.	1,687	50,431,486	2,137,512	53,784,381	7,606,005	9,204,917	1,583,667	22,293,609	42,783,005	79.5	11,001,376	2,196,227	6,063,338	13,363,776
New York, New Haven & Hartford	Sept.	1,843	6,552,081	5,164,766	12,776,670	2,016,438	1,852,906	209,741	5,575,204	10,555,495	82.6	2,221,175	230,000	801,908	1,045,033
	9 mos.	1,841	55,388,779	46,490,062	110,738,208	17,759,728	17,298,138	1,933,098	50,172,322	95,142,459	85.9	15,595,749	5,382,500	124,525	13,633,360
New York Connecting	Sept.	21	175,246	.....	179,716	60,220	13,771	.....	59,496	137,721	76.6	41,995	56,078	63,863	143,777
	9 mos.	21	1,556,484	.....	1,580,042	513,325	138,840	.....	533,988	1,206,478	76.4	373,564	484,035	761,309	1,467,149
New York, Ontario & Western	Sept.	547	551,922	14,629	628,320	142,308	118,829	23,872	335,343	650,166	103.5	—21,846	43,875	—145,026	—49,065
	9 mos.	547	4,701,317	156,503	5,469,253	993,274	1,020,156	227,732	3,064,396	5,565,192	101.8	—95,939	370,851	—1,154,302	—772,069
New York, Susquehanna & Western	Sept.	120	316,931	40,817	374,024	37,687	44,102	4,599	159,687	263,151	70.4	110,873	7,362	51,166	45,694
	9 mos.	120	2,519,243	362,111	3,006,634	313,492	349,667	43,126	1,372,283	2,238,876	74.5	767,758	286,296	31,821	499,880
Norfolk & Western	Sept.	2,161	11,192,723	743,250	12,229,393	1,459,565	2,376,796	234,583	3,538,987	8,012,327	65.5	4,217,066	2,790,041	2,349,703	1,886,054
	9 mos.	2,161	85,205,602	8,748,531	96,726,455	12,981,092	19,889,138	1,860,818	30,006,680	68,268,728	70.6	28,457,727	18,118,300	17,257,845	18,518,564
Norfolk Southern	Sept.	727	614,741	8,544	647,585	150,601	82,273	40,328	245,781	555,889	85.8	91,696	40,383	17,283	—6,900
	9 mos.	727	5,570,310	119,062	5,887,563	1,477,705	751,151	325,403	2,328,032	5,199,405	88.3	688,158	366,028	—9,692	419,887
Northern Pacific	Sept.	6,920	9,614,088	938,497	11,602,768	1,390,653	1,902,771	203,787	4,200,677	8,259,668	71.1	3,343,100	1,200,682	2,415,811	2,843,055
	9 mos.	6,883	70,752,207	11,378,688	91,010,265	16,291,006	18,433,069	1,924,278	35,851,841	78,006,439	85.7	13,003,826	8,605,958	7,922,096	18,599,747
Northwestern Pacific	Sept.	331	474,553	7,110	508,782	120,508	86,101	3,913	216,392	436,001	85.7	72,781	33,163	43,139	16,537
	9 mos.	331	3,331,519	64,972	3,600,569	1,333,921	595,331	32,314	1,876,967	3,918,547	108.8	—317,978	258,206	—772,283	466,449
Oklahoma City-Ada-Atoka	Sept.	132	55,673	.....	57,019	23,052	3,407	1,184	24,249	55,233	96.9	1,786	165	—8,893	—2,033
	9 mos.	132	664,065	23	686,156	194,091	30,912	11,526	211,711	483,261	70.4	202,895	65,529	35,576	119,138
Pennsylvania	Sept.	10,121	51,546,267	16,590,017	73,417,909	8,896,445	15,865,293	1,232,809	33,864,925	62,676,063	85.4	10,741,846	3,759,878	6,325,564	6,007,296
	9 mos.	10,121	396,890,100	161,219,264	604,501,802	76,787,078	142,248,357	11,870,880	297,346,468*	556,149,508	92.0	48,352,294	33,443,312	9,787,575	90,667,673
Long Island	Sept.	376	1,294,119	2,641,424	4,178,309	417,955	612,426	31,161	2,000,228	3,130,811	74.9	1,047,498	441,327	268,218	255,257
	9 mos.	376	10,035,024	23,070,750	34,858,036	3,819,271	5,041,976	266,993	17,408,777	27,214,836	78.1	7,643,200	3,952,600	1,020,362	3,325,718
Pennsylvania-Reading Seashore Lines	Sept.	390	507,825	544,905	1,095,819	169,363	136,097	10,655	582,328	924,631	84.4	171,188	77,609	—59,368	—105,206
	9 mos.	390	3,836,473	4,571,923	8,687,230	1,509,972	1,013,663	80,586	4,906,110	7,742,285	89.1	944,945	681,371	—922,062	272,930
Pere Marquette	Sept.	1,950	4,018,034	206,839	4,536,140	638,396	802,255	112,544	1,985,437	3,768,204	83.1	767,936	280,954	325,865	236,249
	9 mos.	1,949	31,860,854	1,949,375	36,107,376	5,665,303	7,131,173	916,308	16,169,761	31,816,773	88.1	4,290,603	2,302,847	824,707	4,979,361
Pittsburg & Shawmut	Sept.	97	167,563	.....	168,144	50,630	29,381	3,086	54,914	138,621	82.4	29,523	5,295	17,191	447
	9 mos.	97	1,241,360	.....	1,248,865	304,704	228,301	23,663	398,408	1,009,623	80.8	239,242	45,144	136,930	181,762
Pittsburgh & West Virginia	Sept.	136	443,980	.....	469,211	84,616	101,561	30,734	127,144	373,622	79.6	95,589	28,795	91,489	80,944
	9 mos.	136	3,258,110	43	3,449,797	676,712	805,533	255,382	1,106,397	3,110,551	90.2	339,246	250,419	317,392	1,114,571
Pittsburg, Shawmut & Northern	Sept.	122	67,637	.....	69,115	13,691	11,371	1,079	26,545	59,613	86.3	9,502	5,059	—3,909	—18,931
	9 mos.	160	619,426	.....	631,559	141,173	118,254	9,707	288,652	630,893	99.9	666	47,631	—127,889	—112,755
Reading	Sept.	1,362	7,737,784	631,846	8,770,101	1,265,787	1,670,618	104,929	3,639,640	6,911,551	78.8	1,858,550	975,368	838,674	1,096,596
	9 mos.	1,362	63,248,543	7,593,064	74,376,573	11,951,883	15,231,492	939,489	32,130,113	62,472,357	84.0	11,904,216	6,658,764	4,903,920	10,483,581
Richmond, Fredericksburg & Potomac	Sept.	118	1,023,219	669,546	1,824,395	256,626	307,955	14,660	739,291	1,425,985	78.2	398,410	211,834	132,759	—603,964
	9 mos.	118	10,430,116	7,883,288	19,672,554	2,519,144	2,649,912	150,504	7,302,252	13,599,449	69.1	6,073,105	2,853,601	2,253,978	1,592,749
Rutland	Sept.	407	323,181	68,659	468,475	63,088	81,571	12,916	231,330	403,082	86.0	65,393	24,907	28,156	—1,325
	9 mos.	407	2,707,856	454,261	3,769,977	596,620	746,153	115,216	2,084,508	3,679,524	97.6	90,453	238,371	—231,272	—43,048
St. Louis-San Francisco	Sept.	4,645	6,083,834	977,286	7,662,459	935,077	1,588,522	193,948	3,259,227	6,331,994	82.6	1,330,465	521,184	836,763	1,002,152
	9 mos.	4,645	51,895,711	10,431,700	67,946,865	11,620,446	14,875,973	1,788,807	29,601,471	61,289,292	90.2	6,657,573	4,799,064	2,514,387	12,600,743
St. Louis, San Francisco & Texas	Sept.	160	241,001	21,149	276,970	43,929	33,254	14,411	146,095	246,643	89.1	30,327	14,025	—8,896	24,926
	9 mos.	160	2,382,145	198,352	2,685,693	403,131	347,613	118,698	1,244,119	2,190,026	81.5	495,667	123,560	130,353	286,128

Table continued on second left-hand page.

* Transportation expense for 8 mos. was $263,481,543. This was inaccurately reported in *Railway Age* of October 12.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF SEPTEMBER AND NINE MONTHS OF CALENDAR YEAR 1946—CONTINUED

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income: 1946	1945
St. Louis Southwestern Lines	Sept.	1,575	$3,516,448	$147,317	$3,800,557	$566,175	$468,191	$120,041	$1,210,363	$2,503,165	65.7	$1,297,392	$473,507	$694,226	$1,327,319
	9 mos.	1,575	31,249,874	1,430,118	33,917,456	5,777,829	5,198,486	1,073,489	11,087,360	24,487,586	72.2	9,429,870	3,235,755	4,847,438	8,432,985
Seaboard Air Line	Sept.	4,150	5,928,024	1,385,881	7,991,545	1,422,611	1,544,579	271,718	3,332,353	7,010,513	87.7	981,032	431,259	355,050	1,540,478
	9 mos.	4,150	61,507,475	16,759,323	83,897,171	13,912,272	14,786,766	2,375,696	33,728,489	69,029,798	82.3	14,867,373	4,379,266	7,439,630	14,414,336
Southern Railway	Sept.	6,484	14,128,069	2,722,430	17,945,152	2,479,640	3,127,697	322,714	7,281,819	13,896,436	77.4	4,048,716	1,885,349	1,874,974	1,453,133
	9 mos.	6,484	120,582,381	27,636,287	158,632,803	25,343,157	29,357,666	2,807,623	64,541,298	128,525,193	81.0	30,107,610	13,780,555	12,857,404	21,796,548
Alabama Great Southern	Sept.	315	973,117	155,209	1,201,536	184,615	283,300	26,092	470,287	1,012,792	84.3	188,744	122,801	78,420	93,442
	9 mos.	315	7,959,711	1,990,682	10,632,281	1,855,667	2,510,092	233,876	4,166,985	9,271,146	87.2	1,361,135	921,988	350,075	1,220,238
Cinn., New Orleans & Texas Pacific	Sept.	337	2,064,007	242,439	2,441,594	300,015	619,368	46,763	849,745	1,908,246	78.2	533,348	321,207	289,431	316,653
	9 mos.	337	17,385,113	3,047,858	21,723,208	2,732,363	5,068,970	390,501	7,787,060	16,829,480	77.5	4,893,728	2,618,730	2,674,581	3,366,080
Georgia Southern & Florida	Sept.	397	289,038	71,387	393,641	92,271	68,617	6,629	180,243	362,136	92.0	31,505	31,614	—27,557	49,647
	9 mos.	* 397	2,910,832	847,631	4,125,949	816,778	624,313	55,933	1,799,150	3,434,526	83.2	691,423	251,094	158,427	589,286
New Orleans & Northeastern	Sept.	204	613,594	80,934	733,545	127,839	74,016	14,457	218,965	468,876	63.9	264,669	77,943	124,461	39,651
	9 mos.	204	4,780,281	1,091,312	6,256,565	1,278,981	779,286	125,441	2,036,084	4,553,168	72.8	1,703,397	661,759	477,164	872,611
Southern Pacific	Sept.	8,228	24,821,445	4,794,755	32,586,128	4,084,071	6,362,625	688,541	15,012,499	28,348,674	87.0	4,237,454	866,904	1,717,781	1,576,502
	9 mos.	8,244	206,719,009	56,010,058	288,470,044	43,186,685	60,039,732	6,590,672	125,699,386	256,361,680	88.9	32,108,364	2,348,039	17,722,026	26,780,276
Texas & New Orleans	Sept.	4,322	6,430,496	1,115,850	8,139,987	1,375,561	1,289,097	194,608	3,267,015	6,572,156	80.7	1,567,831	—287,122	1,437,707	1,754,053
	9 mos.	4,322	57,949,591	12,932,951	76,157,635	13,826,330	12,601,354	1,701,619	29,245,347	61,331,649	80.5	14,825,986	462,827	10,377,462	11,094,277
Spokane, Portland & Seattle	Sept.	944	1,761,109	662,847	1,939,931	400,566	200,065	15,735	618,003	1,301,103	67.1	638,828	*3,481	557,221	590,413
	9 mos.	944	12,109,027	926,840	13,959,987	4,137,802	1,720,556	150,002	5,379,277	12,018,270	86.1	1,941,717	354,976	754,405	3,525,975
Tennessee Central	Sept.	286	277,649	10,270	306,454	65,745	65,237	8,391	150,652	307,511	100.0	—1,057	30,467	—50,612	2,350
	9 mos.	286	2,358,579	146,560	2,658,350	507,039	501,564	63,944	1,193,084	2,403,180	90.4	255,170	237,585	—131,013	196,438
Texas & Pacific	Sept.	1,873	3,474,798	600,269	4,504,235	682,264	707,972	142,446	1,624,671	3,443,616	76.5	1,060,619	333,207	577,182	1,069,161
	9 mos.	1,873	29,631,316	8,168,540	41,822,446	6,365,963	6,400,569	1,248,297	14,689,344	31,352,587	75.0	10,469,859	3,325,959	5,751,027	7,741,109
Texas Mexican	Sept.	162	186,753	166	215,333	24,081	25,409	4,696	59,084	124,699	57.9	90,634	18,337	57,709	41,528
	9 mos.	162	1,649,482	2,629	1,861,406	418,231	197,400	43,149	565,509	1,324,567	71.2	536,839	175,599	223,748	283,525
Toledo, Peoria & Western	Sept.														
	9 mos.														
Union Pacific System	Sept.	9,775	25,072,191	4,390,913	32,722,933	3,861,955	6,101,955	631,604	12,924,668	25,471,577	77.8	7,251,356	3,018,295	2,616,495	1,509,142
	9 mos.	9,775	189,931,035	51,678,434	265,830,613	35,215,214	51,654,365	5,794,584	102,311,807	212,308,681	79.9	53,521,932	25,623,220	19,419,052	29,786,316
Utah	Sept.	111	165,866	.....	166,217	22,995	36,540	690	66,907	132,083	79.5	34,134	13,488	20,912	13,592
	9 mos.	111	1,148,474	.....	1,149,906	196,914	327,006	6,204	430,714	1,007,595	87.6	142,311	105,980	61,325	121,587
Virginian	Sept.	661	1,933,424	7,484	1,991,959	289,023	532,041	31,158	539,429	1,454,782	73.0	537,177	351,700	392,579	498,022
	9 mos.	661	18,424,390	71,741	19,019,400	2,457,826	5,259,403	284,672	4,796,142	13,375,226	70.3	5,644,174	3,139,600	3,732,243	6,114,941
Wabash	Sept.	2,393	5,614,668	575,948	6,615,138	1,169,956	1,075,468	206,841	2,871,321	5,594,306	84.6	1,020,832	76,489	506,744	625,064
	9 mos.	2,393	48,662,546	5,962,184	58,432,729	9,438,444	9,097,368	1,854,715	25,427,589	48,423,237	82.9	10,009,492	2,012,138	4,621,900	6,842,634
Ann Arbor	Sept.	294	470,779	6,255	498,867	85,049	99,905	19,674	229,326	448,515	89.9	50,352	34,193	8,341	24,974
	9 mos.	294	4,169,401	64,317	4,407,113	651,999	871,851	173,562	2,131,490	3,961,005	89.9	446,108	273,047	71,984	526,197
Western Maryland	Sept.	839	2,842,009	20,832	2,956,048	447,815	542,000	62,034	940,797	2,094,128	70.8	861,920	389,000	519,341	463,196
	9. mos.	839	22,298,397	310,933	23,606,054	3,235,913	4,570,007	532,190	8,028,212	17,382,021	73.6	6,224,033	2,935,000	3,690,654	4,783,488
Western Pacific	Sept.	1,195	3,639,489	462,876	4,232,891	455,085	584,421	119,665	1,295,873	2,641,671	62.4	1,591,220	728,071	720,303	407,781
	9 mos.	1,195	24,680,268	5,502,907	31,329,311	4,693,092	5,179,125	1,033,362	11,539,264	24,075,874	76.8	7,253,437	3,181,984	3,258,489	4,847,841
Wheeling & Lake Erie	Sept.	505	2,064,010	.....	2,162,748	274,883	311,984	50,310	690,480	1,382,612	63.9	780,136	442,263	501,369	244,778
	9 mos.	505	14,690,069	15	15,324,282	2,288,780	2,976,365	446,600	5,631,762	11,873,668	77.5	3,450,614	2,598,993	2,373,570	2,604,104
Wisconsin Central	Sept.	1,051	1,721,993	94,284	1,984,109	273,561	275,888	46,373	838,107	1,501,118	75.7	482,991	—79,317	478,204	—222,750
	9 mos.	1,051	14,423,629	893,229	16,814,651	2,207,864	2,611,969	426,884	7,629,850	13,499,997	80.3	3,314,654	473,814	1,855,409	1,646,384

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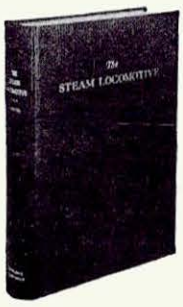

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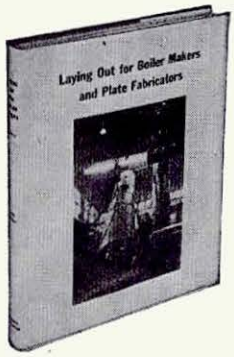

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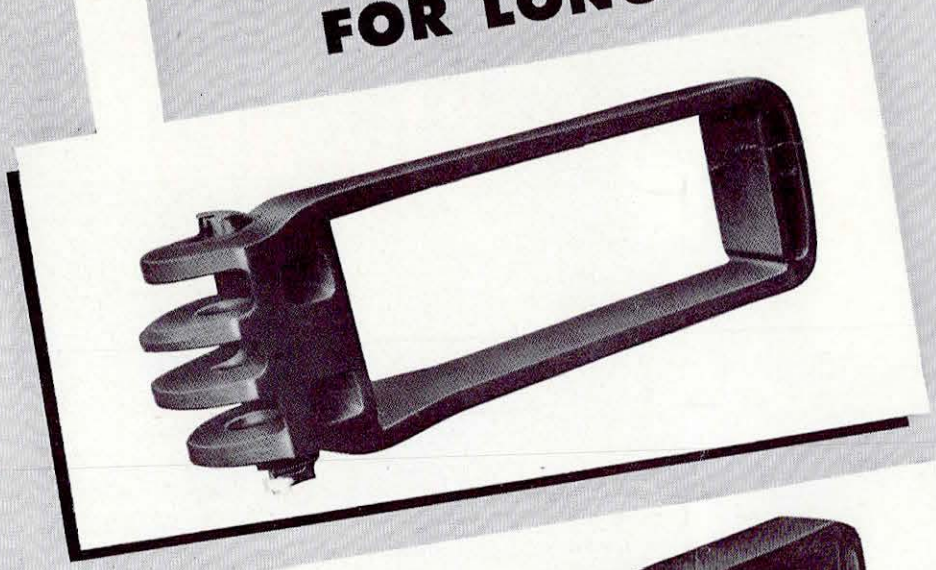
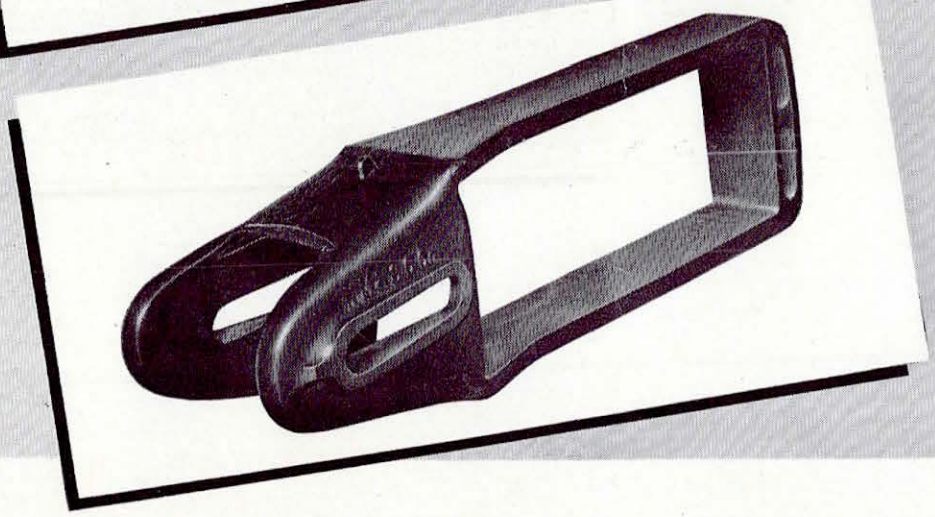


A. A. R. Vertical plane swivel yoke



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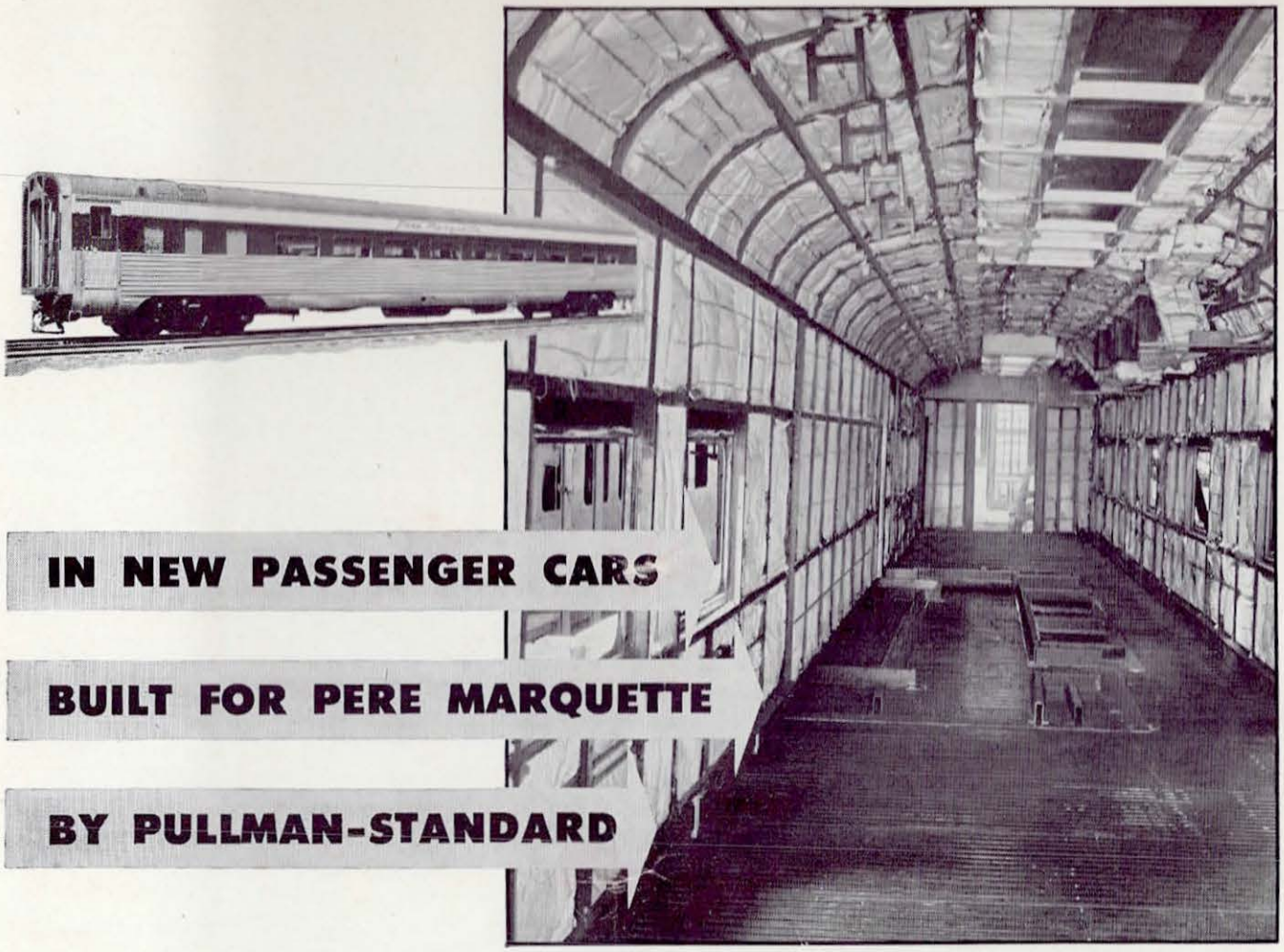

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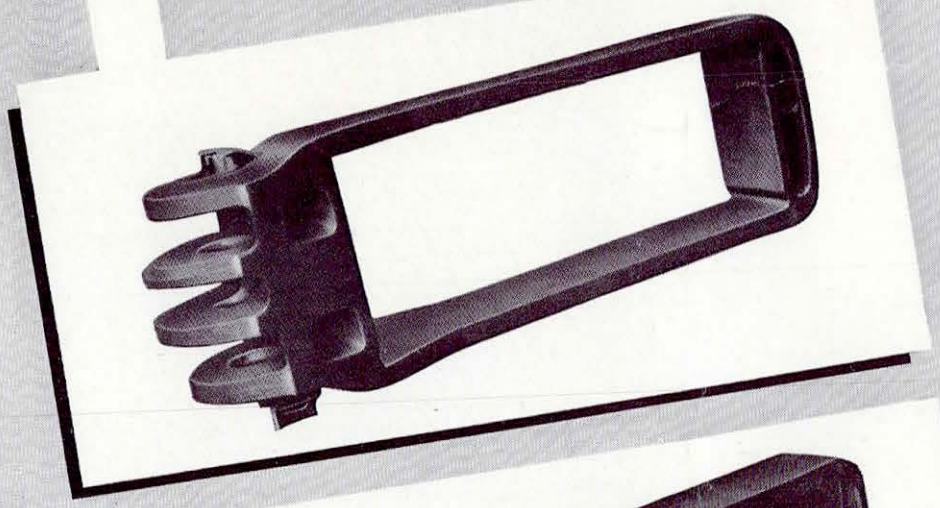
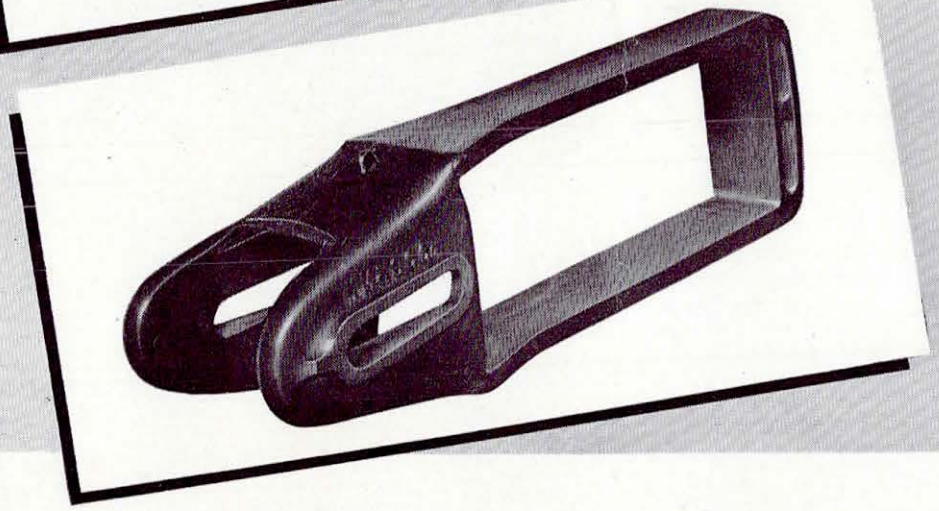


A. A. R. Vertical plane swivel yoke



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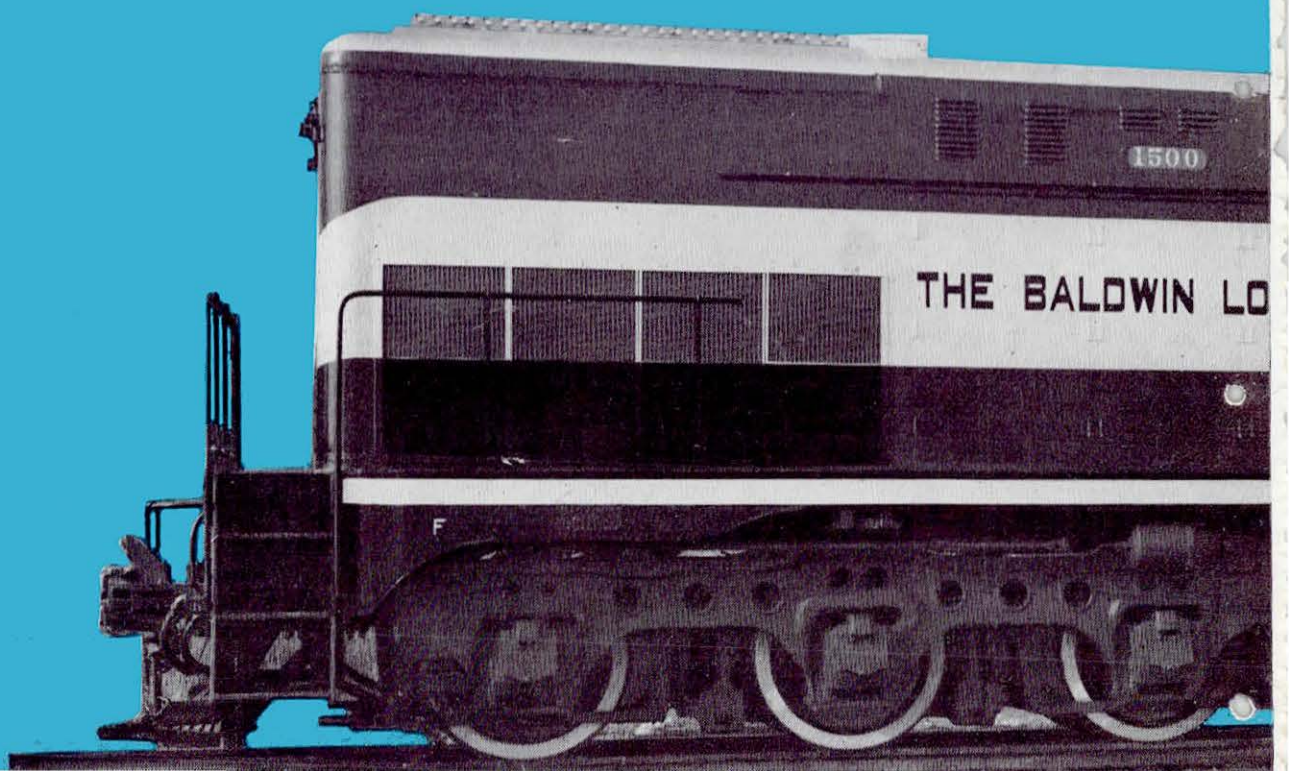

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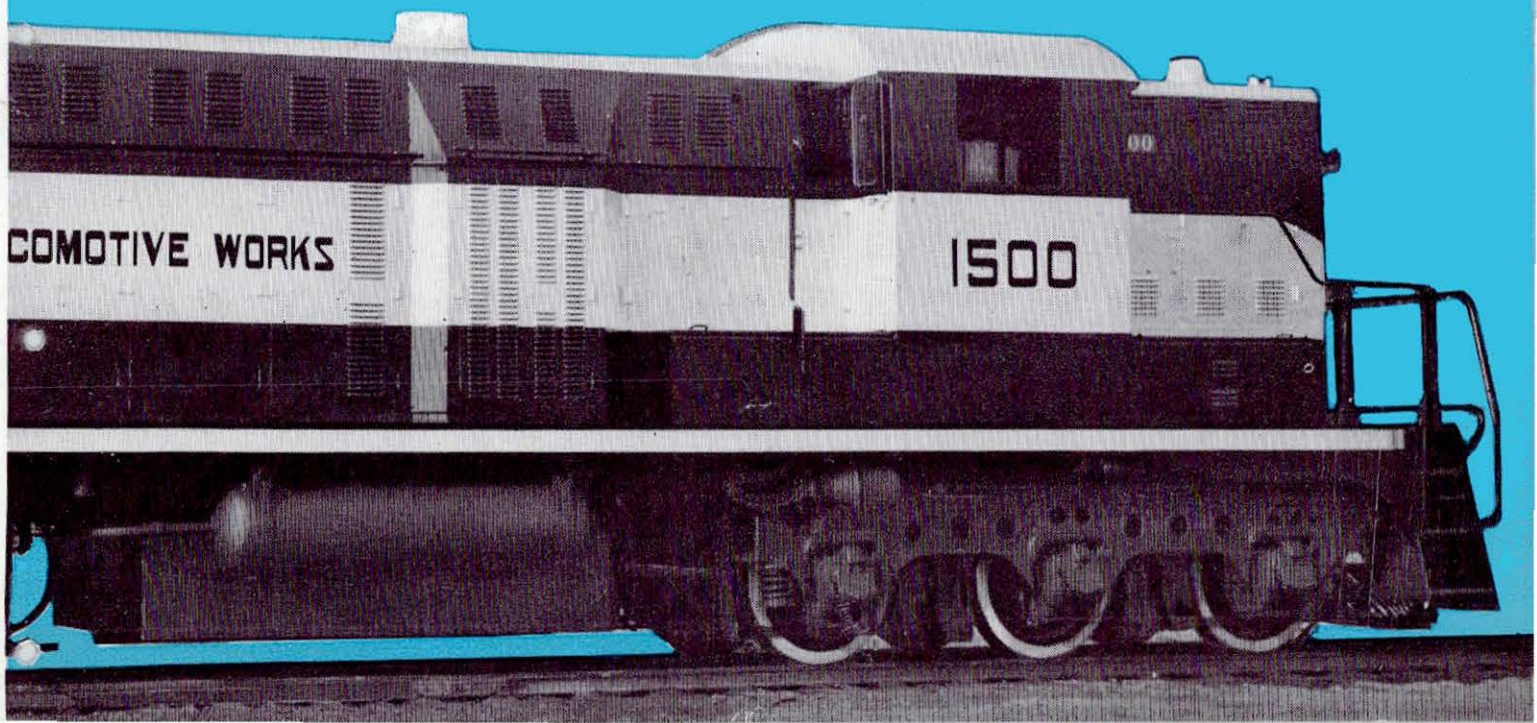

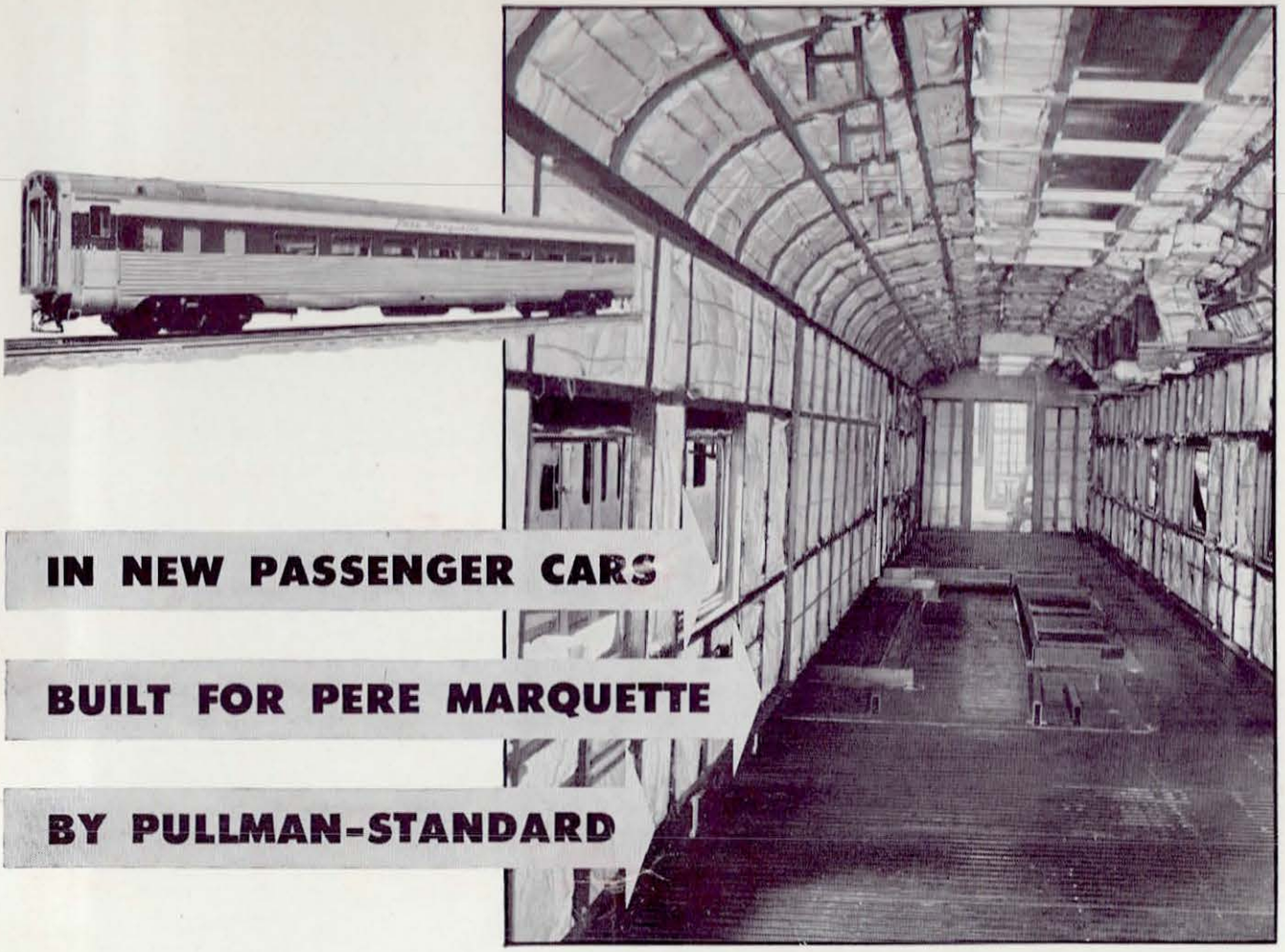

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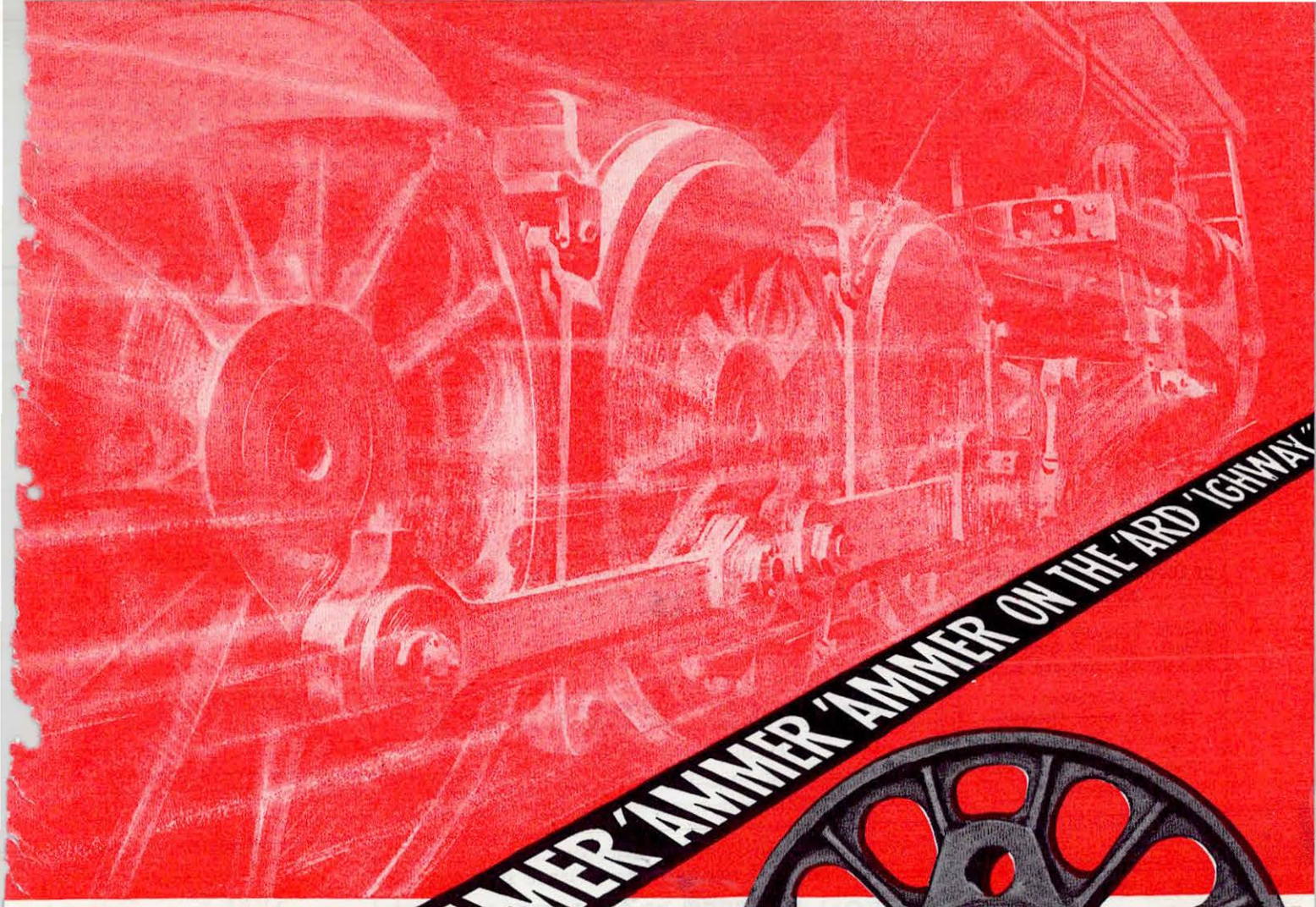

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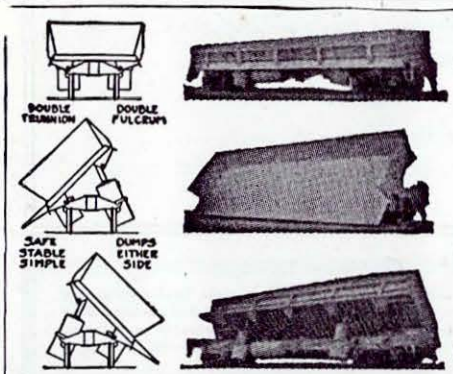

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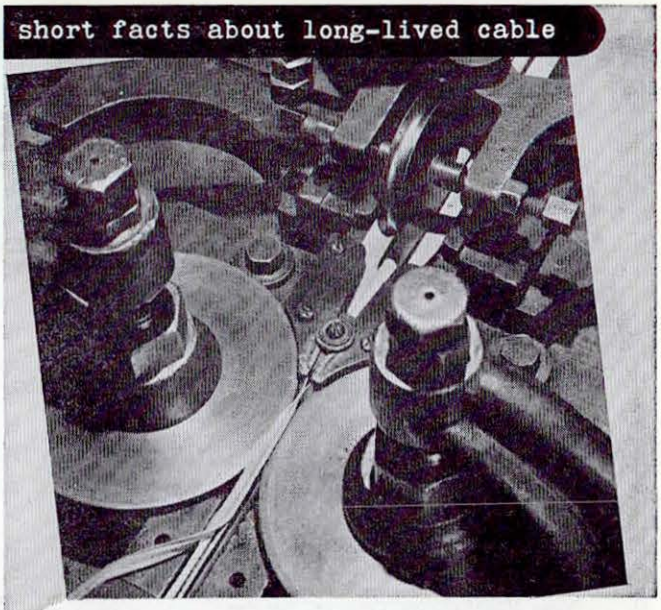

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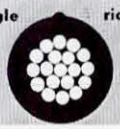

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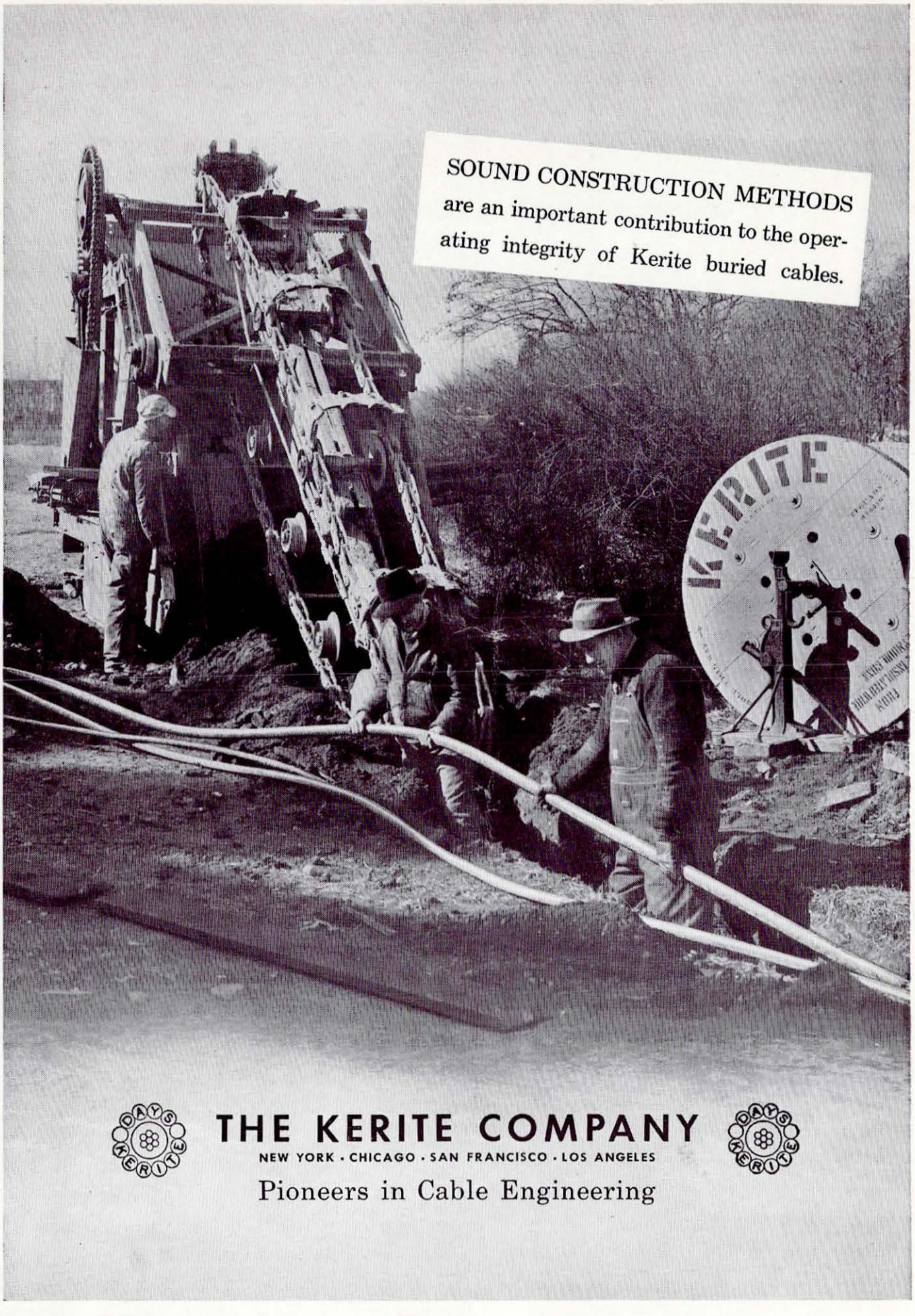

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